

Discovery Installation and Administration Guide

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About Discovery

Welcome to Discovery

Discovery is a tool designed to automate the process of auditing and monitoring networked PCs and other network devices in your organization.

It allows the administrator to audit your information technology assets anywhere on the network, and compile a comprehensive inventory of the hardware, system software and software applications installed and their usage. In addition, Discovery LANProbe provides the physical location of devices including PCs, printers, routers and other network devices.

The complete process is easily controlled by the administrator through the Discovery Control Center. The Control Center is divided into two panes: the left Tree Control and, on the right, the Contents Window.

The Control Center issues messages to the Client Agent which performs the auditing. Messages from the Client Agent are returned to the Server Agent which updates the Repository. For more information see the sections *Discovery Control Center*, *Deploying the Client Agent* and *How Discovery works*.

Discovery Web Edition

Discovery Web Edition provides easy-to-use asset analysis tools, universal access and configurable security in addition to the powerful inventory tracking capabilities of Discovery. Web Control Center is an easy to use web interface that users from anywhere in the organization can open in Internet Explorer (version 4 or above) to analyze the data about your organization.

The administrator can configure who can access the Web Control Center and the level of access they have, from complete anonymous access by any member of staff to control by country, department or other organizational unit.

The Web Control Center has its own help facility that provides examples of how to analyze your IT assets in a number of different ways including "what if" scenarios. The resulting reports can be printed.

Note: In this document, unless Discovery Web Edition is mentioned specifically, any reference to Discovery means both the Discovery and the Discovery Web Edition products.

How Discovery can help you

Discovery provides the following facilities:

- Simple, flexible, rapid deployment across your network without disrupting users.
- Automatic discovery of network device location and configuration using Discovery LANProbe.
- Automatic tracking of physical location.
- Asset tracking through the comprehensive auditing of networked computers, standalone computers, and servers, for hardware, software applications and location information.
- History by re-auditing. Auditing can be carried out according to a schedule and on demand.

- Software usage. This could allow you to move an application from a computer on which it is installed but not used, to another computer (thereby saving the expense of a new license).
- Ability to audit software that is available to a user through a Windows 2000 Terminal Server or Citrix Metaframe client session.
- Ability to display the audit information in a number of ways:
 - By Organizational Unit to reflect your company structure.
 - By physical location.
 - By software product.
- Flexible reports and queries of audit information.

Standalone PCs

Discovery includes the capability to audit standalone or non-networked PCs and to import the audit data into the Repository.

Documentation

Discovery comes with extensive on-line documentation, available from the **Help** menu in the Control Center. There is also context sensitive help available in dialogs. The Web Control Center has its own online help.

Getting Started

Before proceeding you should have read the *Planning your installation* chapter and installed the product.

You should now be in a position to begin the process of auditing the IT assets in your organization.

1. Run the Discovery Control Center

From the Start menu on your computer, select **Programs** then **Symantec**, then **Discovery** and then **Control Center**.

See the next section *Discovery Control Center* for more information on using the Discovery Control Center.

2. Set up the Client Agent Options

Before deploying the Client Agent you can set up the control parameters that control the agent when it is installed onto a client computer. See *Client Agent Options*.

If you want to prompt the user to enter information, configure the user input dialog. See *Gathering Custom Information from Users*.

3. Deploy the Client Agents

There are several ways in which the Client Agent and the Multi-Platform Client can be deployed onto the Client machines you wish to Audit. See *Deploying the Client Agent*.

Note: After deployment the Client Agent and the Multi-Platform Client provide the same functionality and return the same data; therefore, unless a section specifically makes a distinction, where the help mentions the Client Agent it applies irrespective of which client you are running on a particular client computer.

The files used to install the Client Agent are CSETUP.EXE and CLIENT.DAT. For more information see *CSETUP.EXE command line switches* and *Explanation of Client.DAT*.

For information about installing the Multi-Platform Client see *Deploying the Multi-Platform Client*.

4. Ensure the users have appropriate access rights

Make sure that users have the appropriate access rights to run the Client Agent setup program from the Client Files Folder if the agent is being deployed via the login script method. See *Deploying the Client Agent Via Login Scripts*.

If you are using the Shared Message Folder as the communication method, the Clients must also have appropriate access rights for the Client Agent to access the Shared Message Folder. See *Configuring a Shared Message Folder*.

5. Run the Web Control Center

If you have Discovery Web Edition, the Web Control Center is available in Internet Explorer (version 4 and above). Simply open the browser and type in the URL set up during installation. If required, customize the user interface with your company logo and set up access rights using the separate online help to guide you. The URL can be published to anyone who needs to access the Web Control Center.

Remote Computers

Discovery includes the capability to audit remote computers that are connected via an external IP connection, such as a Remote Access Server or via an Internet connection. See *Auditing Remote Computers via an IP connection*.

Standalone PCs

Discovery includes the capability to audit standalone or non-networked PCs. See *Auditing a standalone computer*.

Remote Servers

Discovery includes the capability to audit remote servers or servers that you do not want to deploy the Client Agent on. See *Auditing a remote server*.

Documentation

Discovery comes with extensive on-line documentation, available from the Help menu in the Control Center. The Web Control Center in Discovery Web Edition has its own additional online help.

Discovery Control Center

The Control Center is the hub of Discovery. It allows the administrator to control the auditing and updating of all PCs on the network. It provides tools for managing the way in which the audit information is gathered and presented.

The Repository

As computers are audited, a database of information is built up in the central Repository which is located on the server where Discovery is installed. You view the information in the Repository through the Control Center.

When you first start the Control Center, the Repository contains one Organizational Unit named after the company name you entered during installation. This is the "Company Root folder" and it is displayed in the Tree Control on the left. (See *What happens during installation*). All newly discovered computers appear in this folder.

You can create other folders, called Organizational Units, into which to put the information you gather. You can create a hierarchy of folders of Organizational Units to suit the organization of your company. Then, when you collect details about individual computers, you move them into the appropriate Organizational Unit.

The Contents Window on the right displays the contents of the folder selected in the Tree Control.

Multi-user use of the Control Center

Multi-user use of the Control Center is allowed. The default is four concurrent users (administrators) but this depends on the database you are using (see *What happens during installation*). Any changes made to the Repository by one instance of the Control Center are instantly reflected in other instances as soon as the user does a screen refresh.

Controlling the display in the Contents Window

The Contents Window is the right hand pane in the Control Center. It displays the contents of the entry you select in the Tree Control, for example, the computers in an Organizational Unit or the schedules in the Schedules folder.

The information is displayed in columns and the number of columns and the column headings depend on the selected entry.

In addition, some columns can be turned on and off by clicking the icons in the Toolbar. You can also sort (or re-order) the list as explained below.

Sorting the Display

The entries in the Contents window can be ordered in a number of ways.

To change the order

To change the order, click on the appropriate column heading in the Contents Window.

The new order depends on the column heading that you clicked on, for example:

- Alphabetically by **Name**
- Alphabetically by **Status**
- By **Type**: Within each type, entries are listed alphabetically

- By **Last Contact Date**
- By **Location**
- By **Organizational Unit**
- By **Usage**

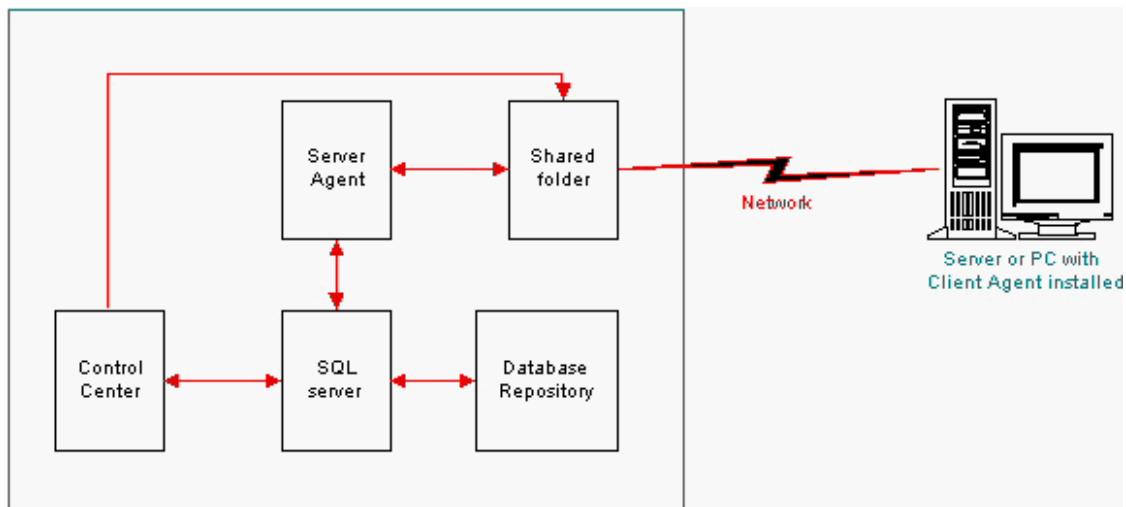
How Discovery works

The following diagram illustrates how the various components of Discovery communicate with each other. This depends on the method of communication selected during installation.

Note: The following information applies equally to Discovery and Discovery Web Edition. If you have installed Discovery Web Edition, the Web Control Center communicates with the SQL server in order to access the Database Repository. This is not shown in the following diagrams.

Shared Message Folder Method

When you issue a command from the Control Center that is destined for a networked computer, the command is passed to the shared message folder.

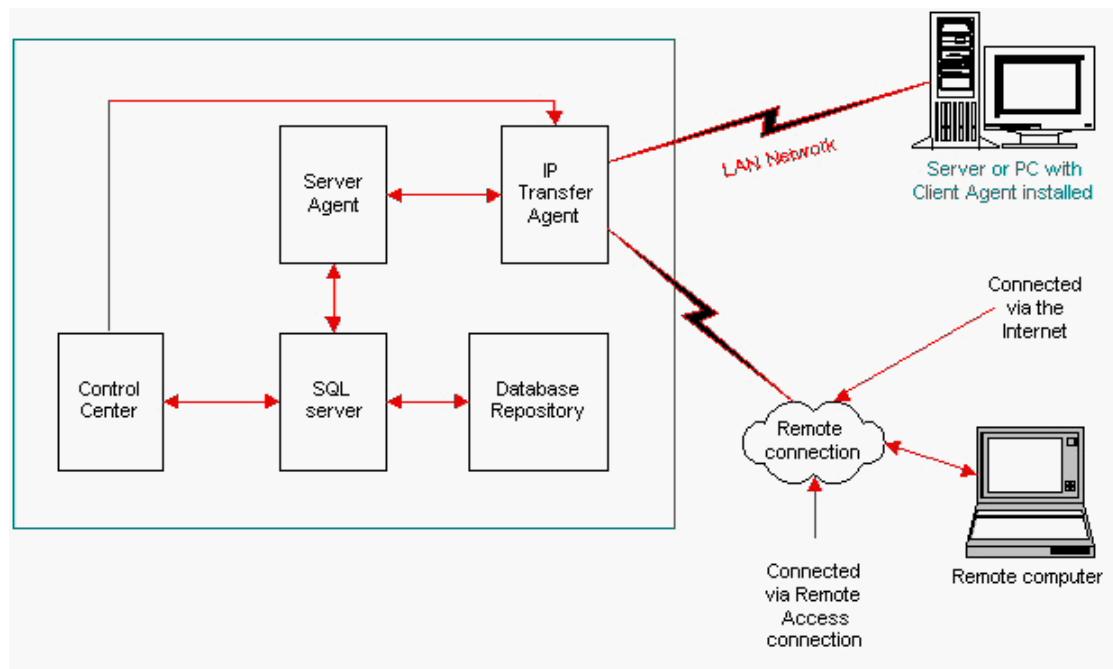


The Client Agent regularly polls the shared message folder to pick up instructions issued by the Control Center. The Client Agent also returns messages to the Server Agent via the shared message folder. The Server Agent then communicates with the SQL server which updates the Repository.

The changes in the Repository are reflected in the Control Center.

Also see the next section *What "As soon as available" means.*

IP Based Method



The changes in the Repository are reflected in the Control Center.

Also see the next section.

What "As soon as available" means

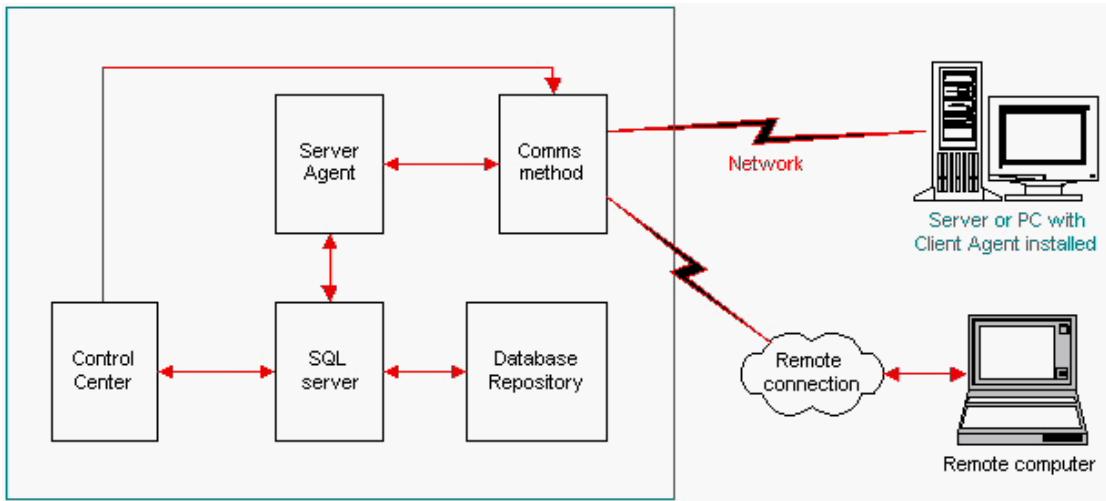
When you use the Control Center, commands that you issue are communicated to client computers via the communication method installed (either shared message folder or IP based method). The Client Agent regularly checks in the shared message folder or with the IP agent to see if there are any messages for its client ID.

Examples of messages for the Client Agent include:

- Audit schedules (attaching, updating or deleting)
- On demand audit (audit now)
- Canceling an audit
- Request to delete the Client Agent

The Client Agent runs in the background all the time that the client computer is switched on. At times you may issue a command for the Client Agent when the computer is not switched on, not logged in to the network, or there is no available IP connection for the client.

In this case, the command will be carried out "*as soon as the computer is available*".



For example, if you attached a schedule to a computer that is not switched on or not logged in to the network, the schedule is not saved on the client computer until the computer is switched on and logged into the network.

Another possibility is that you issue a command to delete the Client Agent. Because schedules are held locally on the client computer, it is possible that further audits will occur before the Client Agent is deleted if the client computer has been switched off or disconnected from the network. A similar situation could occur if you tried to cancel an audit.

Planning Your Installation

Supported platforms and system requirements

The following are for guideline purposes only:

Discovery Server and Administration Control Center

Processor: Pentium Class
Memory: Starting at 128MB
Disk: At least 512MB
Operating System: Microsoft Windows NT4, 2000, XP

Client operating systems

Microsoft Windows 95, 98, ME
Microsoft Windows NT4, 2000, XP
Red Hat Linux on Intel platform
Sun Solaris on SPARC
HP-UX on PA-RISC

Network environments

Microsoft Windows built on NT technology
Novell Netware 3.11 or higher

Discovery Web Edition

Supported platform and system requirements for Discovery Web Edition are the same as for Discovery with the following additions.

Discovery Web Edition Server

Microsoft IIS4, IIS5

Supported browsers

Microsoft Internet Explorer 4 or higher

Planning your installation

The purpose of this section is to describe the decisions that need to be made, and the tasks that need to be performed, before attempting to install Discovery on a large and complex network.

In summary, you need to:

- Choose the method by which the Discovery Client Agent communicates with the Server Agent and Control Center.
- Decide whether to use an existing Microsoft SQL 7.0 (or later) installation or install the supplied Microsoft SQL server.
- Choose the computer that will hold the Discovery Repository and run the Server Agent.

- Choose the computer or computers upon which the Discovery Control Center is to be installed.
- Choose the method or methods by which the Client Agent will be deployed.
- Choose a location for the Client Files Folder.
- If necessary, create a network account for use by the Discovery components.

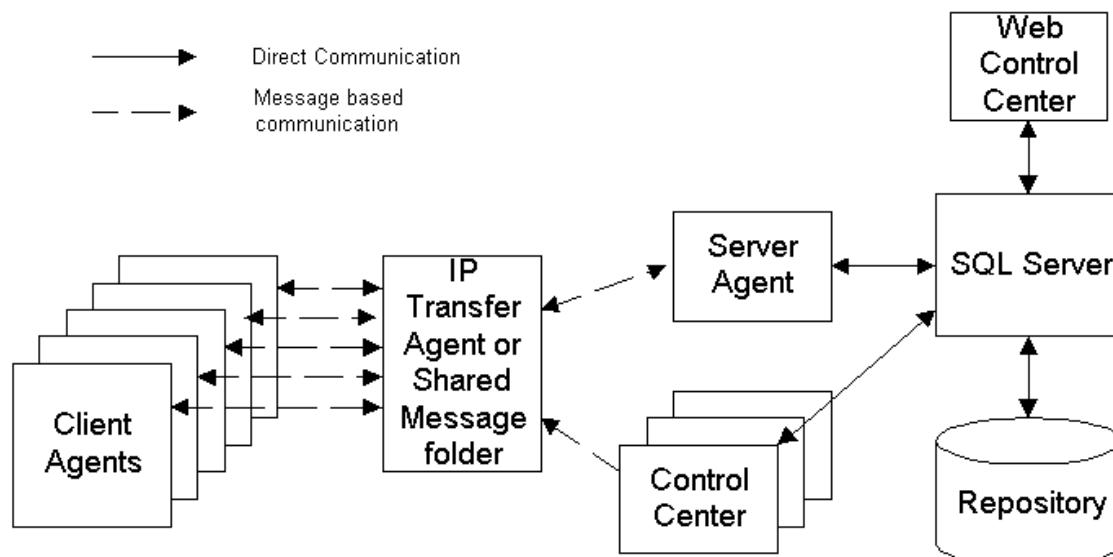
Note: For Discovery Web Edition, in addition to the points above, you need to decide where to install the Web Control Center. This must be on a machine that has IIS4 installed (IIS5 for Windows 2000). It can be on the same or a different computer from the other Discovery components as discussed in the following topics.

Two example installations are included at the end of this section.

Discovery Overview

Discovery is made up of the following distinct components. These are:

- The Control Center
- The Server Agent
- The Microsoft SQL Server
- The Repository
- The IP Transfer Agent or Shared Message Folder
- The Client Agent
- (*Discovery Web Edition only*) Web Control Center



The **Control Center** provides the main user interface to Discovery. It allows the contents of the Repository to be viewed and audits to be requested and scheduled. The Control Center sends messages to the Client Agent, for example 'Request Audit'. More than one Control Center can be installed and they can access the Repository simultaneously.

The **Server Agent** processes all messages sent by the Client Agent and updates the Repository via the SQL Server. It sends 'confirmation' messages to the Client Agent when messages have been processed successfully.

The **SQL Server** is the means by which the Repository is accessed. Discovery is shipped with Microsoft SQL Server. Alternatively an existing installation of Microsoft SQL 7.0 or later can be used.

The **Repository** is a database file conforming to the Repository Schema. All access to the Repository is via the SQL Server.

The **IP Transfer Agent** transfers messages to and from Client and Server Agents. It can be replaced by a **Shared Message Folder**. A Shared Message Folder is a folder that can be accessed by all Client Agents as well as the Server Agent and the Control Center.

The **Client Agent** runs on all computers that you wish to audit and performs the hardware and software audits. It sends the results to the Server Agent via 'Audit Messages'. The Client Agent stores the results of the last audit and only sends changes or 'Deltas' to the Server Agent. The Client Agent also includes the Discovery LANProbe. This detects other hardware on the same network segment; for example, other computers, network routing devices and standalone network printers. This data can be used in the Control Center to track the physical location of hardware.

The **Web Control Center** provides the user interface for interrogating the Repository in order to analyze your assets and produce reports. It communicates with the SQL server in order to access the Repository. The Web Control Center does not change any information; it only retrieves and interprets data.

Method of communication

There are two possible methods by which messages can be transferred between the Client Agent and the Server Agent/Control Center. These are:

- Via IP using the IP Transfer Agent (the default if IP is available)
- Via a Shared Message Folder

The two methods cannot be used simultaneously. The communication method is set during installation and cannot be changed subsequently except by deleting the Client Agents and redeploying them from a fresh installation.

Message Transfer via IP (the default)

With IP based message transfer, a server (or workstation) is designated as the point of contact and the IP Transfer Agent is installed on it.

When the IP Transfer Agent is used, a Message Folder is still required, but it does not need to be accessible by all network users.

The IP Transfer Agent listens for IP connections from Client Agents. When a Client Agent is ready to send or receive messages, it makes an IP connection to the IP Transfer Agent and the messages are transferred.

Incoming messages from a Client Agent are placed in the Message Folder where the Server Agent can access them. Outgoing messages from the Control Center or Server Agent are placed in the Message Folder. When the Client Agent next makes a connection, the messages are transferred.

Advantages:

- Secure

- Remote dial in users are supported
- Internet based auditing is supported
- No need for all network users to access a single server, therefore no access or license issues.

Disadvantages:

- Platform dependant – your network must support IP.
- Not supported on DOS clients and some Windows 3.1 clients.

If you select to use the IP Transfer Agent during installation, you will be prompted to enter the address of the computer upon which you are installing.

The Internal IP Address can be:

- An IP address, e.g. 195.11.0.10
- A computer name that can be resolved to an IP address.

If you also wish to audit remote computers connected via the Internet (e.g. through an ISP), after installation is complete but before you deploy the Client Agent, you should go into the Control Center, select **System Settings** from the **Settings** option in the **Tool** menu and open the IP Settings Page. Then enter an external IP address for the Discovery Server. This external address may be different to its internal address if address translation takes place at the point of connection of your internal network to the Internet. The *IP Settings Page is in the system Settings dialog - see the next chapter.*

Ideally, the computer running the IP Transfer Agent should be always switched on.

Message Transfer via Shared Message Folder

Note: This option only appears if IP is not detected during installation.

The Shared Message Folder is a network folder for which all network users have full read/write permissions. Messages are sent by writing files into the folder. Messages are received by reading files from the folder.

Advantages:

- Protocol independent
- All platforms are supported (DOS, Windows 3.1, 95, 98, NT, 2000 and XP)

Disadvantages:

- Many networks do not have a single server that can be accessed by all users.
- There may not be a server that has sufficient licensed connections available to be accessed by all client computers.
- Doesn't support remote dial-in users.
- Not supported on UNIX clients and therefore cannot be used with the Multi-Platform Client.

If you select to use a Shared Message Folder during installation, it is created as the sub-folder **Messages** under the Client Files Folder. The Shared Message Folder can be changed from the Control Center. You must set the access permissions for the Shared Message Folder after Discovery has been installed.

Microsoft SQL Server

If you already have an installation of Microsoft SQL 7.0 or later, you can use this to access the Discovery Repository. During installation enter the network name of the computer that has MS SQL 7.0 installed. If it is the same computer as you are installing on, select (local). If you select (local) and MS SQL is not present, the Microsoft SQL server supplied with Discovery will be installed.

The installation process will create an empty Discovery Repository.

The Discovery Repository must reside on the same computer as the SQL Server.

Where to put the components

This section describes the alternatives you have when installing Discovery and Discovery Web Edition. This depends on the type of network your organization uses.

Note: When installing Discovery Web Edition, the Web Control Center can be installed on its own or at the same time as the other components and this depends on where it is being installed. This does not affect the decisions that you need to make for the other components, as detailed in this topic. The choices for the Web Control Center are described afterwards: see *Where to put the Web Control Center* below.

Windows NT/2000/XP network

The simplest practical installation of Discovery on a Windows NT/2000/XP network is as follows:

- Install the Server Agent, SQL Server, Repository and IP Transfer Agent (if applicable) on a single Windows NT/2000/XP server.
- Install the Client Files Folder and Shared Message Folder (if applicable) onto the same server and set up the necessary access permissions.
- Install the Control Center on the workstations of the users who will need to administer the Discovery Repository.

See *Where components can be installed* below.

Novell Netware/Intranetware network

If you are using a Shared Message Folder, the simplest practical installation of Discovery on a Novell Netware/Intranetware network is as follows:

- Install the Server Agent, SQL Server and Repository on a Windows NT/2000/XP workstation.
- Install the Client Files Folder and Shared Message Folder onto a Novell Server visible to all network users and set up the necessary access permissions.
- Install the Control Center on the workstations of the users who will need to administer the Discovery Repository.

If you are using the IP Transfer Agent, the simplest practical installation on a Netware/Intranetware network is as follows:

- Install the Server Agent, SQL Server, Repository and IP Transfer Agent on a Windows NT/2000/XP workstation or server.

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- Install the Client Files Folder onto a Novell Server visible to all network users and set up the necessary access permissions.
- Install the Control Center on the workstations of the users who will need to administer the Discovery Repository.

Ideally, the computer running the Server Agent and/or the IP Transfer Agent should be running continually. However, the Discovery architecture is sufficiently robust that this need not be the case.

See *Where components can be installed* below.

Where to put the Web Control Center

The Web Control Center must be:

- on a server that has IIS installed
- installed locally, that is you cannot install the Web Control Center on to a machine remotely, you must load the Discovery CD-ROM into the machine on which you want to install the Web Control Center.

The SQL server can be on the same machine as the Web Server. This can be either an existing SQL server installation or the SQL server provided with Discovery.

Alternatively, the SQL server can be on a remote machine. If you are using an existing SQL server, then you simply need to tell the installation program where to find it. If you need to install the SQL server on a different machine to the Web Control Center, **you will need to install the two components separately**. First install the SQL server along with the communication agents, then return to the machine on which you will install the Web Control Center with the Discovery CD-ROM and install only the Web Control Center.

If the Web Control Center is installed separately, then you will be prompted for:

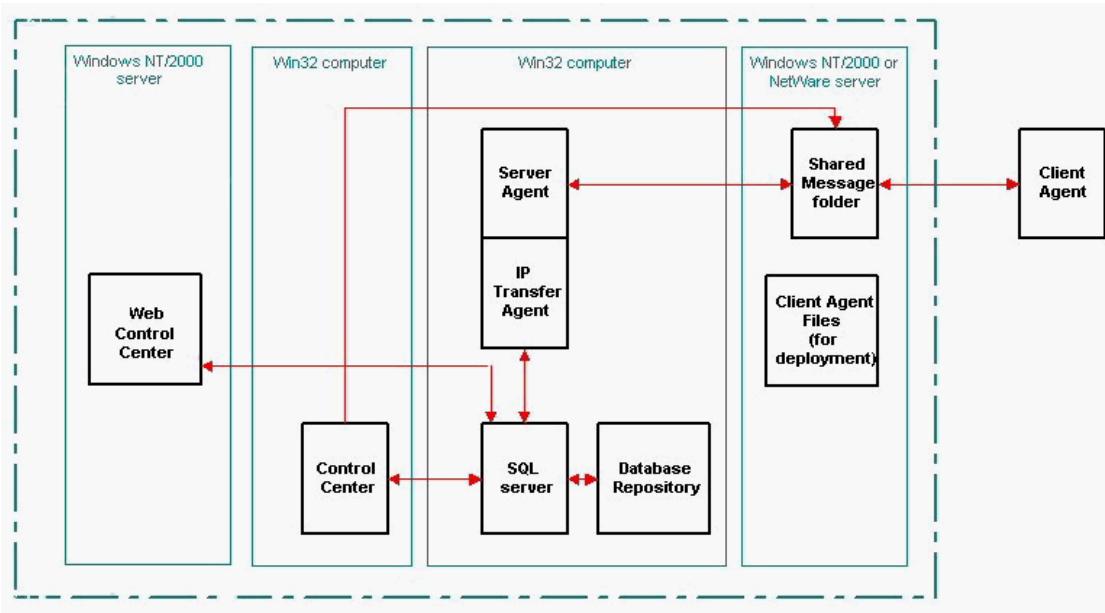
- The Destination folder. By default, Discovery Web Control Center will be installed into the following folder:
C:\Program files\Symantec\Discovery
- The Web address at which users will find the Web Control Center; for example, www.symantec.com/Discovery. You will need to publish this URL to all users who will have access to the Web Control Center. They then simply open their web browser (Internet Explorer version 4 or above) and type in the URL to open the Web Control Center.
- The location of the SQL server.

Where Components can be installed

In a Windows NT/2000/XP based network environment, Discovery can be installed on to one machine, or alternatively, you may want to install some components on different machines.

In a NetWare or IntranetWare environment, more than one machine is required because the Control Center, Microsoft SQL server and Server Agent must be run on Windows machines.

The diagram below shows an installation whereby you could use four computers to complete the Discovery installation, or optionally all the components could be installed on a single Windows NT, 2000 or XP computer.



Note: In the diagram above, Win32 means any of the following: Windows NT, 2000 or XP.

Client Files Folder

The Client Files Folder contains the Client Agent files ready for deployment.

If you plan to deploy the Client Agent via users' login scripts, the Client Files Folder must be located on a server that is visible to all relevant users and all users must have Read, Filescan and Execute permissions. The Write permission is not required.

If you plan to use another deployment method, the Client Files Folder only needs to be visible to you.

The Client Files Folder can be created during installation, but you must be sure you have the correct access permissions for the folder on the network where you want to put it.

Network account for services

Note: This section only applies if you use the shared folder method of communication.

On Windows NT/2000/XP computers, the Client Agent, Server Agent and IP Transfer Agent run as Services. When a process runs as a service it continues to run even when no user is logged in to the computer, and as a result needs to have knowledge of user account details in order to access the network. This account is the Service Account.

During installation, if you are using the shared folder method, you will be asked to enter a username and password to be used by services. This account needs to have read/write access to the Message Folder, wherever it may be on the network.

If the Client Agent is running as a service on NT/2000/XP computers, it can use the Service Account to access the Shared Message Folder. Therefore on NT/2000/XP only networks, the Shared Message Folder only needs to be visible to the Service Account.

The Service Account should be created **before** running Setup to perform the installation. However you can change the account subsequently in the Service Account page of the System Settings dialog.

Method of Client Agent deployment

There are four methods by which the Client Agent can be deployed on to computers you want to audit:

- Via users' login scripts
- Via a direct network connection to a Windows NT/2000/XP computer
- Via an Email attachment
- Via a floppy disk

You are free to use any combination of these deployment methods.

Note: For information about deploying to UNIX clients, see *Deploying the Client Agent*.

Users' Login Scripts

The Client Agent setup program, CSETUP.EXE, needs to be added to the login scripts of the users of the computers that you want to audit. CSETUP.EXE resides in the Client Files Folder along with the rest of the Client Agent files.

Advantages:

- New computers added to the network are registered as soon as a user logs in.
- CSETUP.EXE command line parameters can be used to generate more complex and meaningful computer names.

Disadvantages:

- The Client Files Folder must be visible to all network users.
- Your network may not use login scripts.
- Remote dial-in users are not supported.
- A user must sit at the computer to login (inconvenient for some servers).

Direct Network Connection to a Windows NT/2000/XP Computer

From the **Tools** menu, select **Deploy Client Agent**, then **Deploy as Windows NT/2000/XP Service**. Then from the Deploy Client Agent wizard, select one or more NT/2000/XP computers visible on the network and 'push' the Client Agent onto them.

Advantages:

- No user intervention is required on the target computer; therefore, this method is ideal for isolated servers.
- The Client Files Folder doesn't need to be shared.
- The Client Agent will run with full Administrator permissions on the target computers and therefore be able to audit hardware and software that may not otherwise be visible to it.
- You can remove the Client Agent from the NT/2000/XP computers that it was deployed to with this method using a command from the Control Center.

Disadvantages:

- Only Windows NT/2000/XP computers are supported.

- You may need to perform the 'push' several times if the some computers are not switched on at the time of deployment.
- New computers added to the network are not detected automatically.
- You must know the Administrator Password for the domain containing the target computers, or be logged on as the domain administrator on the domain containing the target computers.

Email Attachment

From the **Tools** menu, select **Deploy Client Agent**, then **Create Email Package** to create an Email Package File. This is a self-extracting copy of the Client Files Folder. You must then email it to all the users whose computers are to be audited.

Advantages:

- Remote dial-in users are supported.
- The Client Files Folder does not need to be shared.

Disadvantages:

- The user must be relied on to execute the Email Package file.

Floppy Disk

From the **Tools** menu, select **Deploy Client Agent**, then **Generate Standalone Diskette** to create a Standalone Diskette. This is a 1.44Mb floppy disk that contains all the necessary Client Agent files. You then take the disk to the computer you want to audit and run AUDIT.EXE from it. After the audit has completed you take the disk back to the workstation running the Control Center and import the data into the Repository.

Advantages:

- The target computer does not need to be on the network.

Disadvantages:

- You must carry the disk to and from the target computer.
- Only a small number of computers can be audited with a single Standalone Diskette.

Examples

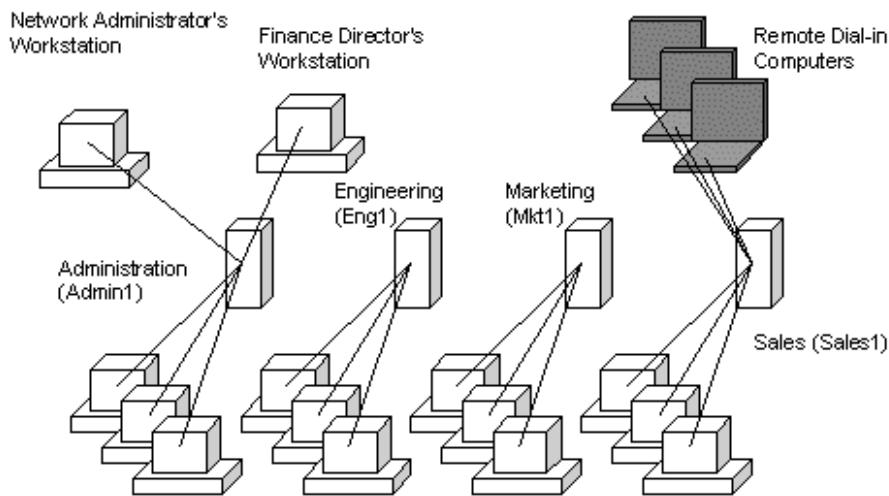
This section provides two examples of installing Discovery.

Example 1

Windows NT based Network with four Windows NT 4 servers. There are a mixture of Windows 95/98/NT/2000/XP client workstations and also several Windows NT 4 remote dial-in laptops.

There are four NT domains, 1 per server: Administration, Engineering, Marketing and Sales.

Discovery Installation and Administration Guide



The Network Administrator is given the task of installing Discovery. He follows the directions laid out in this guide:

- Choose the method by which the Discovery Client Agent communicates with the Server Agent and Control Center.

The network uses the IP protocol. It has 4 separate servers, each with only one quarter of the total licensed connections required. There are also remote computers that will connect via the internet. Therefore he chooses to use the IP Transfer Agent.

- Decide whether to use an existing Microsoft SQL installation or install the version supplied with Discovery.

Note that the Repository must go on the same computer as the SQL Server.

- Choose the computer that will hold the Discovery Repository and run the Server Agent.

He chooses Admin1, because it is in his office. He must go to Admin1 to perform the installation.

- Choose the computer or computers upon which the Control Center is to be installed.

He will install the Control Center on his workstation, and also on the Finance Director's workstation. Again, he must go to the computers in question to perform the installation.

- Choose the method or methods by which the Client Agent will be deployed.

The network does not currently use login scripts, and there is no single server that all users can login to. Therefore, he cannot use login script deployment. He chooses to use a combination of direct network connection and email.

- Choose a location for the Client Files Folder.

For convenience, he chooses to put these onto Admin1.

- If necessary, create a network account for use by the Discovery Components.

The Client Agent will communicate via IP and therefore does not need to access a Shared Message Folder.

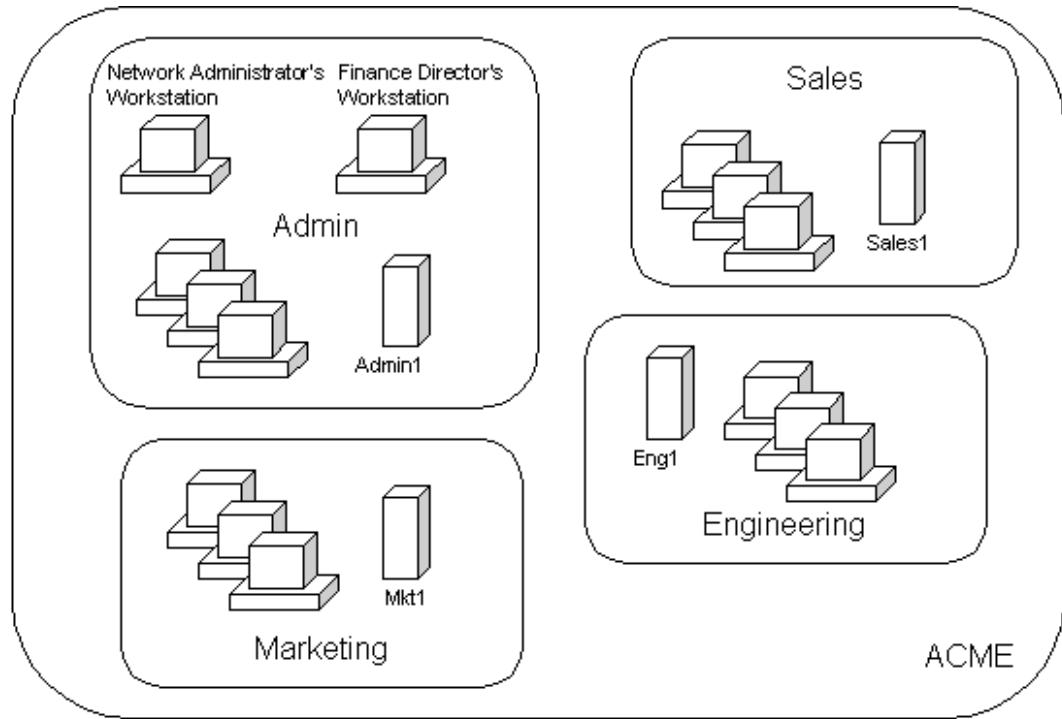
The Server Agent and IP Transfer Agent will run on Admin1 even when no user is logged in on the server's console. However, because the Message Folder is on the same server, no network account is required to access it.

Therefore no network account is required.

Example 2

Novell Directory Services (NDS) based network with four Netware 4 servers. There are a mixture of client workstations running DOS, Windows 3.1, 95, NT, 2000 and XP.

The Netware 4 servers are: Admin1.Admin.ACME, Sales1.Sales.ACME, Mkt1.Marketing.ACME and Eng1.Engineering.ACME.



The Network Administrator is given the task of installing Discovery. He follows the directions laid out in this guide:

- Choose the method by which the Discovery Client Agent communicates with the Server Agent and Control Center.

All users on the network can access all the servers and there are no remote dial-in users. Some of the workstations use an IPX Netware Client. Therefore, he chooses to use a Shared Message Folder, located on the server Admin1. Because many of the computers

Discovery Installation and Administration Guide

to be audited are not NT based, he must assign full read/write permissions to the Shared Message Folder for all network users.

- Decide whether to use an existing Microsoft SQL installation or install the version supplied with Discovery.
- Choose the computer that will hold the Discovery Repository and run the Server Agent.

All servers are running Netware and therefore cannot be used. He chooses to install the Microsoft SQL Server, the Discovery Repository and the Server Agent on his workstation (a computer running Windows NT). He plans to leave his computer switched on as much as possible, but this is less important than it would be if he were using the IP Transfer Agent.

- Choose the computer or computers upon which the Control Center is to be installed.
He decides to install the Control Center on his workstation and also on the Finance Director's workstation.
- Choose the method or methods by which the Client Agent will be deployed.

All the users on the network login via one of four login scripts, one per NDS sub-tree (Admin, Sales, Marketing and Engineering). He chooses to distribute the Client Agent via the login scripts.

- Choose a location for the Client Files Folder.
He chooses to put the Client Files Folder on the Admin1 server. He must assign full read permissions to the Client Files Folder for all users.
- If necessary, create a network account for use by the Discovery Components.

The Server Agent will be running on a Windows NT computer (his) and the Shared Message Folder is not local. Also, some of the workstations to be audited will be running Windows NT. Therefore, he must create an account that the Server Agent and Client Agent can use to access the Shared Message Folder.

Installing & Configuring

What happens during installation

You install Discovery via the Setup wizard. The wizard is designed for fast flexible installation and guides you through the many options you may have. This topic describes those options.

If you have not already done so, we suggest that you read the section *Planning your installation*. Then read all this section and look at the diagram in the section *Where components can be installed*.

To install Discovery, run the Setup wizard on the Windows administrator console.

Components to Install

By default all the Discovery components will be installed. Unselect the relevant check boxes if you do not want to install particular components.

The following components can be selected:

- Control Center
- Database files and Communication Agents
- (*Discovery Web Edition only*) Web Control Center

Control Center

The Control Center can be installed separately and multiple copies of the Control Center can be used to administer the same Repository. Also a Control Center can be installed on a remote computer to manage a remote installation of Discovery.

If the Control Center is installed separately, then you will be prompted for the location of the SQL server that is to be used.

By default Discovery Control Center will be installed into the following folder:
C:\Program files\Symantec\Discovery

Note : The Control Center must be installed on one of the following environments: Windows 95, 98, NT, 2000 or XP.

Database Files and Communication Agents

If you choose to install the database files and communication agents, this will install all the files required for the SQL server, the repository, the client and server agents and will configure the options required for the Server and Client agents to communicate.

To complete the installation, do the following:

Enter your name, company and serial number

- The company name is used to rename the default Organizational Unit (Company Root) and the default physical location.
- The serial number contains the number of licenses. This is the number of client computers that you are licensed to audit.

Discovery Files

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Select the folder to install the Server Agent and IP Transfer Agent files into as well as the Control Center files if this option has been selected.

By default these files will be installed into the following folder:
C:\Program files\Symantec\Discovery

Note: This is also the machine on which the Server and IP Transfer agents will run when the machine has been restarted. Therefore this machine should be left running for the Client Agents to communicate using the IP based method.

Select the default SQL server and Repository

Choose either the SQL server supplied with Discovery, or an existing installation of Microsoft SQL 7 or later. Discovery will not run on an earlier version of SQL server.

If **Microsoft SQL 7 or MSDE** is NOT installed on the computer you will be asked if you wish to install Microsoft SQL Server (Runtime). Doing so will install the following

- SQL files into C:\MSDE2000
- Discovery Repository into C:\MSDE2000\DATA

If there is an **existing installation of Microsoft SQL 7 or later** it will prompt for the following:

- The server to be used.
- The system administrator password for the SQL server if it is not blank.

Select the Client Files Folder

This is the folder where client files will be stored for deployment onto all the client computers you wish to audit.

The folder that you select must be accessible to all client machines where you select to deploy the client agent via Login Scripts. See *Deploying the Client Agent*.

e.g. <\\share\client files folder>

Read and Filescan rights are required for this folder. For more information on access rights see *Deploying the Client Agents Via Login Scripts*.

Select the IP address for Communication

Enter Internal IP address

You will be required to enter the Computer name or Static IP address for the computer that you are installing the IP Transfer agent onto.

- **IP address:** for example 192.111.0.10. This method is only valid if you are using static IP addresses.
- **A Computer name:** the name of the computer, which can be resolved to an IP address.
- **A URL:** for example, www.symantec.com.

Note: If you are using DHCP or other means of dynamic IP address allocation then you MUST enter the Computer name.

Note: The IP based method cannot be used with DOS only client computers (they must have Windows on them).

Shared Message folder method

You must decide on the directory to contain the shared message folder. This is the folder used to communicate with the Client Agents and for messages returned from the Client Agents for the Server Agent.

If you select this method of communication, then a shared messages folder called **MESSAGES** will be created in a subdirectory below the Client Files Folder you selected previously:
 \\share\Client files folder\MESSAGES

Messaging Agents Username and Password

For the messaging agents to be able to communicate via the Shared Message folder, they require a user account to be able to access this folder on the server drive. Enter the account details: domain, username and password.

THIS IS ONLY REQUIRED for Windows NT, 2000 and XP client machines where the agents will be running as a service when they communicate to the Shared Message folder.

Web Control Center

The Web Control Center can be installed separately and must be installed on a Windows NT, 2000 or XP computer that has MS Web Server (IIS4 or IIS5) installed. This server can be an Intranet or an Internet server.

If the Web Control Center is installed separately, then you will be prompted for:

- The Destination folder. By default Discovery Web Control Center will be installed into the following folder:
 C:\Program files\Symantec\Discovery
- The Web directory at which users will find the Web Control Center; for example, www.symantec.com/Discovery. You will need to publish this URL to all users who will have access to the Web Control Center. They then simply open their web browser (Internet Explorer version 4 or above) and type in the URL to open the Web Control Center.
- The location of the SQL server.

Opening a remote Repository

If your company has more than one installation of Discovery, and the second installation uses a Repository on a remote server that you can access over the network, you can open the remote Repository from the local Control Center.

To open a remote Repository

1. From the **File** menu, select **Open Repository**.
 The Open Repository dialog opens.
2. Either type in the full path to the remote server containing the Repository.
3. Click **OK**.

The Control Center displays the information in the remote Repository. The information in the local Repository remains intact; you can redisplay it at any time by using the Open Repository dialog.

Configuring a Shared Message Folder

To configure the Shared Message Folder method for communication between the server and the clients you must first ensure that all users of the network can access the shared message folder, all users need at least the following permissions to the Discovery files:

Permissions for the Shared Messages folder i.e. the **MESSAGES** sub-folder created below the Client Files directory must be as follows:

- All users must have Full control permissions.

To Setup Share Permissions for Windows NT/2000/XP Network

From Windows NT/2000/XP Explorer:

1. Select the **MESSAGES** sub-folder below the Client Files folder chosen during installation and right click. Then select the **Sharing** option and then select **Permissions**
2. Allocate the appropriate permissions to users or groups of users.

To Setup Share Permissions for Novell NetWare or IntranetWare Network

Make sure that all users have READ, WRITE, CREATE, FILE SCAN and EXECUTE capabilities in the **MESSAGES** sub-folder created below the Client Files directory chosen during installation.

Deploying the Client Agent

Deploying the Client Agent

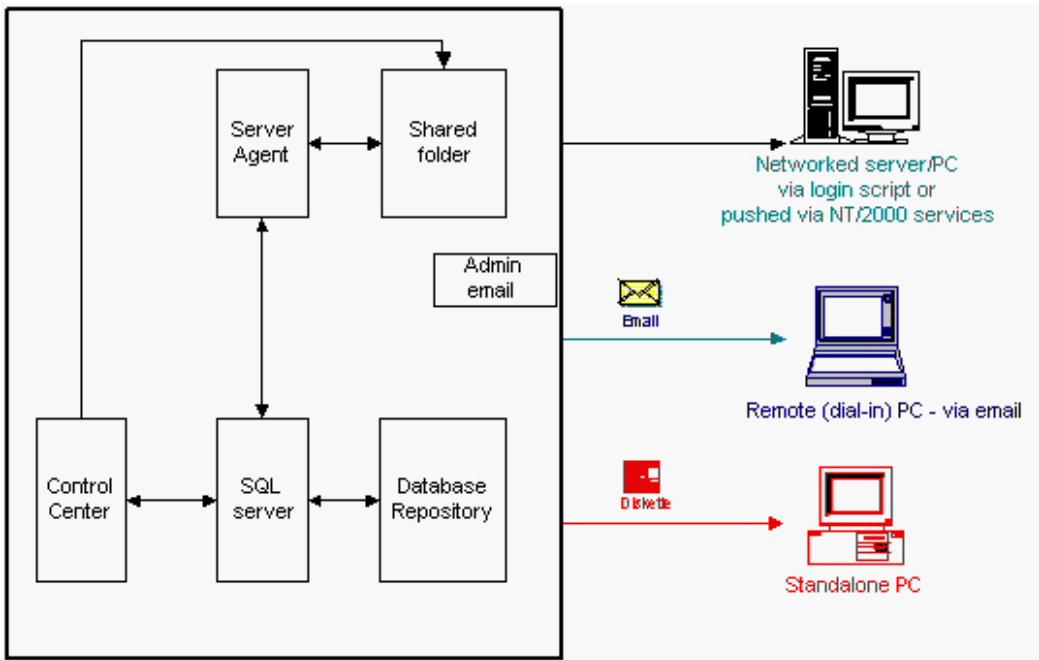
The Client Agent and the Multi-Platform Client are the Discovery software components that perform the auditing on a computer. (The Multi-Platform Client is used to audit UNIX clients - see *Deploying the Multi-Platform Client*.) Before an audit can be carried out on a computer, the appropriate client must be installed on that computer. After installation, the client remains resident on the computer performing future audits as and when requested.

Deployment Methods for the Client Agent

Discovery provides a number of ways to rapidly deploy the Client Agent to the computers and servers throughout your organization as listed below and they can be used in any combination throughout your organization. Use the one(s) that suit your organization's requirements. The process of installing the Client Agent and auditing computers can be completely controlled by the Administrator and be totally transparent to the user. Alternatively, the Administrator can involve the user, as appropriate (see *Client Agent Options*) and can prompt the user to enter information when the Client Agent is installed (see *Gathering Custom Information from Users*).

Note: You should set the Client Agent options before deploying the Client Agent.

The diagram below shows the different ways in which the Client Agent can be deployed.



Via a login script

Login scripts can be used to deploy the Client Agent throughout a Windows NT/2000/XP or a NetWare/IntranetWare network. Every computer that runs the login script will have the Client Agent deployed when the computer is logged in to the network. (The information added by Discovery is only a small fraction of a typical login script; therefore, you should not experience any degradation of network performance.) See *Deploying the Client Agent via Login Scripts*.

As a Windows NT/2000/XP service:

This option is available for deploying the Client Agent to client machines or servers that are running Windows NT, 2000 or XP in a Windows NT/2000/XP network environment.

In the Control Center, you select one or more computers. The Client Agent is deployed on these computers straight away if they are logged on to the network; otherwise deployment will have to be retried at a later time.

If the target computers are on a different domain to the one that you are currently logged on to, you can specify a different domain before starting the deployment.

Via email

Use this option for remote PCs that use a dial-in connection. See *Deploying the Client Agent via an email package*.

From a standalone diskette:

Use this option for standalone PCs that have no connection to the network and who do not dial in. See *Auditing a standalone computer*.

Notes

- You can also audit Remote Servers (that is, servers that you do not want to deploy the Client Agent to). See *Auditing a remote server*.
- If necessary, you can remove the Client Agent from a networked computer: See *Removing the Client Agent from a computer*.

- For more information, see *How Discovery works*.

Deploying the Multi-Platform Client

The Multi-Platform Client (MPClient) is the Discovery software component that performs auditing on computers running operating systems other than Windows (for example Linux and UNIX). The MPClient must be installed on the computer before an audit can be carried out. After installation, the MPClient remains resident on the computer performing future audits as and when requested.

The files required to install the MPClient are in the Client Files folder. There is one file for each platform supported.

- mpclient_hpx_parisc.tar.gz – contains the MPClient files for HP-UX / PA-RISC computers
- mpclient_redhat_i386.tar.gz – contains the MPClient files for Red Hat Linux / Intel computers
- mpclient_solaris_sparc.tar.gz – contains the MPClient files for Sun Solaris / SPARC computers
- mpclient_suse_i386.tar.gz – contains the MPClient files for SuSE Linux / Intel computers

The MPClient can be installed in one of two ways.

Method 1:

- Copy the relevant .tar.gz file along with the client.dat, client.xml and kc_pub.pem files to a folder on the target computer.
- Unpack the .tar.gz file using the gunzip and tar utilities. For example
 - gunzip mpclient_hpx_parisc.tar.gz
 - tar -xf mpclient_hpx_parisc.tar
- Execute the deploy.sh script that was contained in the .tar.gz file. You will need to make sure the script file has the ‘execute’ attribute. For example:
 - chmod +x deploy.sh
 - ./deploy.sh

Method 2:

- Make the Client Files folder available as an NFS share. This can be done using third party Windows software, or by copying the Client Files folder onto an NFS Server.
- Mount the Discovery Client Files folder as an NFS share from the target computer. For example:
 - mount disco_server:/clientfiles /mnt
- Execute the deploy_mpclient.sh script that is located in the Client Files folder. You will need to make sure the script file has the ‘execute’ attribute and specify the platform you are deploying to. For example:
 - cd /mnt
 - chmod +x deploy_mpclient.sh
 - ./deploy_mpclient.sh hpx_parisc
- There is also a remove_mpclient.sh script in the Client Files folder.

Deploying via a direct network connection to Windows NT/2000/XP computers

You can select one or more computers running Windows NT/2000/XP to deploy the Client Agent software on. The Client Agent will then be deployed as a Windows NT/2000/XP service on these computers bypassing the need to update login scripts and for users to log in before the Client Agent is deployed. (This method of deploying the Client Agent is particularly useful for servers that are never logged off.)

By deploying the Client Agent via this method, the Client Agent is then able to perform a complete software and hardware audit of the computer because it has full administrator rights, enabling full access which cannot be guaranteed if the login script method of deployment is used.

You can also remove the Client Agent from the computers on which it was deployed using this method, as explained below.

To deploy the Client Agent as a service

From the Tools menu, select Deploy Client Agent, Deploy As Windows NT/2000/XP Service and then the method you want to use.

There are four methods to choose from;

1. Browse a domain

This method will display all the computers in a selected domain. The computers to be deployed to should be checked, unchecked ones are not deployed to. Hidden computers are not visible in the list but can be added to it by clicking the 'Hidden...' button and then entering the names of the hidden computers.

2. Import a list file

This method allows one or more text files to be imported into the list of computers to be deployed to. All computers in the list will be deployed to. The list can be edited manually to add or remove computer names. The files that are imported should be ASCII text files, with one computer name per line.

3. Specify an IP address range

This method allows one or more IP address ranges to be entered into the list. The address range is made up of a start and end address or calculated via a subnet mask. If a range is entered incorrectly it can be removed by selecting it and then clicking the 'Remove' button. Every address in the range will have the client agent deployed to it.

4. Enter computer names

This method presents an empty list where computers should be entered one per line.

Additional Options

Once a method has been selected you can choose additional options from within the deployment dialog.

The 'Update computers already running the client agent' option

If this option is unchecked then only computers not running the client agent will have the agent deployed to them. This option should be checked to update existing client agents.

The 'Advanced' button

Clicking the 'Advanced' button allows you to set the share name to use during deployment, the default is C\$.

Note: If the Client Agent does not get deployed to all the selected client computers, re-run this procedure again at a later date.

To remove the Client Agent

To remove the Client Agent from computers on which it was deployed using this method, see *Removing a Client Agent from a Computer*. However, if the deployment seemed to complete but the computer has not registered, use a method from the **Remove Windows NT/2000/XP Computers** menu in the **Remove Client Agent** option in the **Tools** menu. Then re-deploy the Client Agent.

Deploying the Client Agent via login scripts

The requirements for deploying the Client Agent via a login script on a Windows NT/2000/XP or Novell network are described below.

Windows NT/2000/XP based network

You can deploy the Client Agent software in a Windows NT/2000/XP environment by modifying the login script of all computers that you want to deploy the Client Agent to.

The permissions for the Client Files directory chosen during installation must be enabled so that all users have the following access permissions:

- **All users:** READ permissions
- **Administrator:** Full control permissions

Modify the login script for all users to enable the Client setup file, CSETUP.EXE, to be run on all computers. This will install the Client Agent and its support files on the client computer the first time the user logs in. On subsequent logins, the Client Agent setup checks whether the Client Agent is already deployed on the computer, and if it is, then no action is taken.

Add one of the following commands to the login script file

Example 1: Using a UNC path

```
\Fileserver\Centen\CSETUP.EXE
```

Example 2: Using a Mapped Drive

This example is provided for computer networks that do not support UNC paths.

The first line assigns the drive K: to the shared directory called ClientFiles on the server called Fileserver. Note the space after the K:. The second line executes the Client Setup program.

```
NET USE K: \Fileserve\Centen  
K:\CSETUP.EXE
```

Novell NetWare or IntranetWare networks

On a Novell network, if you choose to deploy the Discovery Client Agent via login scripts, it may be deployed from the system Login script, one of the container Login scripts, or an individual user's Login script. It is recommended that a container or system script is used to ensure that all computers have the Client Agent. Use NWADMIN to update the login scripts.

The permissions for the Client Files directory chosen during installation must be enabled so that all users have the following access permissions: READ, FILE SCAN and EXECUTE.

To deploy the Client Agent via a login script, the Client Agent Setup (CSETUP.EXE) program must be included in the login script(s) used for all the computers that you want to deploy the Client Agent to. The Setup program should be executed from a mapped drive or UNC path.

Example 1: Using a mapped drive

```
MAP ROOT K:=SERVER_SYS:TOOLS\CENTEN  
K:\CSETUP.EXE
```

Example 2: Using a UNC path

```
\SERVER\SYS\TOOLS\CENTEN\CSETUP.EXE
```

Deploying the Client Agent via an email package

For computers that are not normally connected to the network, you can deploy the Client Agent by email. After the Client Agent has been installed on the remote computer, the computer can

then be audited remotely via an IP connection, which could be a remote connection via the Internet or via a remote access dial in connection to your internal network.

This deployment method should be used in conjunction with the IP based method of communication between the server and Client Agents. See *What Happens During Installation*.

To email the Client Agent

1. From the **Tools** menu, select **Deploy Client Agent** and then **Create Email Package**.
The Create Email Package wizard is displayed.
2. Complete the wizard following the instructions displayed.
A self-extracting executable is created that contains all the files necessary to deploy and run the Client Agent.
3. The email product on your computer is automatically started and an email created with the email package as the attachment. Email the file to one or more users, as necessary.
A message is created. The text of the message advises the recipient to run the attachment. See *Auditing remote computers via a IP connection*.
4. When the recipient receives the email they MUST run the executable attachment to install and run the Client Agent. After the agent has been installed on these computers, it will continue to run in the background whenever the computer is switched on. See *Auditing remote computers via a IP connection*.

The Client Agent will communicate with the IP Transfer agent whenever there is a visible IP connection to the server on which the IP Transfer agent has been installed.

Deploying the Client Agent from a standalone diskette

Computers that have no connection to the network and which do not dial in can still be audited by deploying the Client Agent on a standalone diskette. The diskette can then be given or mailed to anyone in your organization who needs to carry out the task.

When the audits are performed, the results are stored on the diskette. (See *Auditing a standalone computer*.) These results can be imported into the Repository so that the data is available in the usual way from the Control Center. See *Importing data from a standalone diskette*.

To create a diskette for auditing standalone computers

1. Put a formatted empty diskette in a floppy disk drive on your computer.
2. From the **Tools** menu, select **Deploy Client Agent** and then **Create Standalone Diskette**.
Follow the steps in the wizard.

The diskette is now ready for use.

Client Agent Dialog

Client Agent Options

You should set the Client Agent Options before deploying the Client Agent . See *Deploying the Client Agent*.

The Client Agent Options dialog is opened from the **Tools** menu. It has one page.

Audit Options Page

This page is used to control:

- whether users can see the audit progress dialog during an audit.
- whether users can cancel the audit.
- whether an initial audit is performed when the Client Agent is installed and the parameters for the audit.
- whether to record software usage.

Note: For Unix clients running the Multi-Platform Client, the only options that are relevant are the Perform hardware audit automatically and Perform software audit automatically check boxes.

To set up the audit options

- 1 From the **Tools** menu, select **Set Client Agent Options**
 - . The Client Agent Options dialog is displayed.
- 2 Select the Audit Options tab.
 - . The Audit Options page is displayed.
- 3 If you want the user to see the progress of an audit, select the Display Audit Progress check box.
 - .
- 4 If you want to allow the user to cancel an audit that is in progress, select the Allow User to Cancel Audit check box. (If a user does cancel an audit, this can be reported. See the Alerts chapter.)
 - .
- 5 In the Progress Text field, type in the text that is to be displayed in the Audit Progress dialog while an audit is being performed, or use the default text supplied.
 - .
- 6 Select whether an audit is performed when a client is registered and the options you require for the initial audit. (If you do not select any of the three check boxes, the initial audit is skipped.)
 - You can perform a hardware, software audit or both.
 - You can prompt the user to enter information by displaying the Customizable User Input dialog. You can configure this dialog to gather the information you want. See *Gathering Custom Information from Users*.
- 7 Click **OK**.
 - .

From now on, the options that you selected will be used for all computers that are registered subsequently.

Gathering custom information from users

You can prompt users to enter information by displaying a dialog. The content of the dialog is up to you, so that you can gather the information relevant to your company and the way in which you manage your resources. You can also use this option to gather information from the Windows Registry. Custom data can be gathered at any time by selecting the Request Audit option. See *Requesting an audit on demand*.

The file USERINP.DAT formats the dialog that prompts for user input. The information gathered is displayed in the Custom Info page of the computer's Properties dialog.

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The Customizable User Input dialog cannot be displayed on DOS computers but it works as follows:

- On Windows 95/98 computers, it is displayed when the Client Agent is installed and when you request an audit.
- On Windows NT/2000/XP computers, it is displayed the next time that the computer is restarted after the Client Agent is installed or you requested an audit.

You can query on the information provided in the Customizable User Input dialog.

An example USERINP.DAT file is provided called EXAMPLE.DAT. This prompts for three fields (Department, Asset tag and Computer make) and picks up information from two Registry keys. You can rename this file to UserInp.DAT, edit it as required or create a new UserInp.DAT. You can edit EXAMPLE.DAT file in any text editor - follow the comments in the file itself and those provided below. The UserInp.DAT file must be stored in the Client Files folder.

You can test the user input dialog by running InpTest.exe. This displays the dialog exactly as the end user will see it. (InpTest.exe is also in the Client Files folder.)

Note: If you change the USERINP.DAT file, the new version must be deployed to the client computers by redeploying the Client Agent.

USERINP.DAT Entries

[Dialog] section

Entry	Possible Values	Description
Heading		The title for the dialog.
Text		The explanatory text to be displayed at the top of the dialog.
Flags *	AllowCancel	Determines whether the Cancel button is available when the dialog is displayed on the user's computer. If the Cancel button is used, the dialog will be displayed when the user's computer is next restarted in order to obtain the required information.

* Optional field

[Fieldn] section

The example file has three sections; Field1, Field2 and Field 3. Each section specifies one field to be displayed. Up to 20 fields can be displayed in the dialog. Either type in additional sections or copy and paste existing ones as preferred.

Entry	Possible Values	Description
Type	DropDown/Edit.	The type of field to be displayed: a drop-down list that the user selects an entry from or a field the user types in.
Name		The text to be displayed for the field. The name must be unique. Use & (ampersand) to mark the shortcut key for this field.
Entry1 to		These entries apply to drop-down fields only and specify the

Entry <i>n</i> *		entries in the drop-down list. For each entry, type in the text to be displayed. n=1 through 512
DefaultEntry *	0 through 512	This entry applies to drop-down fields only and determines the default to be displayed in the drop-down list. The number corresponds to the default entry specified in Entry <i>n</i> . If DefaultEntry=0 is used, there is no default.
Flags *	Compulsory/ Combo/CCOnly	How the field is used: Compulsory: The user must complete this field. Combo: Combines a drop-down list with an edit control. CCOnly: This field is only displayed at the Control Center; it is not displayed to the user. Note: Flags can be combined with a vertical bar.
Tip *		Text to be displayed in the Status when this field is selected. The tip can be used to help the user complete the field.

* Optional field

[Registry] section

This section can be used in addition to the previous ones to obtain additional information from the Windows Registry. The whole section is optional.

Supported keys are HKEY_CLASSES_ROOT, HKEY_LOCAL_MACHINE, HKEY_USERS, HKEY_PERFORMANCE_DATA, HKEY_CURRENT_CONFIG and HKEY_DYN_DATA .

Entry	Possible Values	Description
RegRead1 to RegRead <i>n</i>		These entries obtain information from the Registry rather than by prompting the user. Each entry in this section has the format: RegRead <i>n</i> =" <hkey\subkey>","<value name>","<field name>" See the comments in the file for detailed information about each element. The double quotes ("") are optional.</hkey\subkey>

System Settings Dialog

System Settings

The System Settings dialog allows you to change some of the paths and settings you chose during installation. We recommend that you do not make any changes unless absolutely necessary - there is no way to change the settings on the Client computers without removing the Client Agent and redeploying it.

The System Settings dialog is opened from the **Settings** option in the **Tools** menu. It can have the following pages (the pages depend on whether you are using the IP or Shared Folder method of communication): Client Files Folder page, IP Settings Page, Message Folder page and Service Account. Each page controls one aspect of using the Client Agent on a computer.

Client Files Folder Page

This page is used to relocate the Client Files Folder. The Client Files folder is set up during installation but can be relocated using the System Settings dialog.

To relocate the Client Files Folder

- 1 In the Control Center, from the **Tools** menu, select **Settings** and then **System Settings**.
 - .
- 2 To change the path, click **Change**.
 - .
- 3 Type in or browse for the new network path.
 - .
- 4 Click **OK** to return to the Client Files Folder page.
 - .
- 5 You can now:
 - Click on the Message Folder, IP Settings or Service Account tab.
 - Click **OK**.

The new path is used from now on and Client Agent files copied there for deployment.

IP Settings Page

The IP Settings page only applies if you selected an IP-based installation. It is used to change the address of the server that Discovery is running on.

Note: If you do need to change the IP address of the server, remove the Client Agent from all registered computers, change the IP address of the server and then redeploy the Client Agent to these computers. The computers will be registered with their original computer names and therefore the audit history will be maintained.

The address can be entered in a number of formats, all of which can be resolved to an IP address:

- IP address
- Network name of the server
- URL

Two alternative formats for the address can be entered. They must resolve to the same IP address.

Enter External IP address

If you also wish to audit remote computers connected via the Internet e.g. through an ISP then you must also enter the external IP address for the computer that you are installing the IP Transfer agent onto. This is the address by which this computer is known to the outside world. This address may be different to its internal address if address translation takes place at the point of connection of your internal network to the Internet.

Important Note- the default Port number for the IP connection is – 5003 – you may change this port number if another application is already using this port.

Message Folder Page

This page sets the shared message folder path used by Discovery. It only applies if you are using the shared message folder method of communication.

The shared message folder is initially defined as a UNC path during installation. This dialog allows you to define an alternate path to the same directory. This is necessary if you have client computers that do not support UNC paths. In this case, specify a path using a mapped drive letter.

The Shared Message Folder page also allows you to change the location of the Shared message folder. Use this option carefully, because computers that have already been registered will not receive the new location and will be unable to communicate with the Control Center.

Note: This setting should only be changed if the Discovery installation is being moved to a different location. Once you have changed the location of the Shared message folder, redeploy the Client Agent to all client computers so the client computers are able to continue to communicate. The computers will be registered with their original computer names and therefore the audit history will be maintained. If it is an IP installation and you move the message folder to a different server, you must also update the IP Settings page with the new IP address, and update the clients so they know the new IP address.

To set up the Shared Message Folder options

- 1 In the Control Center, from the **Tools** menu, select **Settings** and then **System Settings**.
The System Settings dialog is displayed.
- 2 Select the Message Folder tab.
The Message Folder page is displayed.
- 3 If necessary, click **Change** to update the UNC network path. **BEWARE: changing the path will prevent existing registered computers from communicating with the Control Center.**
- 4 Set the Alternative path. This must point to exactly the same directory as the UNC path.
- 5 You can now:
 - Click on the Client Files Folder, IP Settings or Service Account tab.
 - Click **OK**.

Service Account Page

Note: This page is only displayed if you are using the shared folder method of communication.

The Service Account only applies when the Client Agent is running as a service on Windows NT/2000/XP systems and using the shared message method of communication. It is used by the Client Agent to write back to the server on which the Server Transfer Agent is running. (See *Network account for services*)

You must know the Administrator Password for the domain containing the target computers, or be logged on as the domain administrator on the domain containing the target computers.

Changing the Service Account, generates a new discover.sys file that is deployed as part of the Client Agent. If you change the Service Account username and password you will need to re-deploy the Client Agent so that existing clients can continue to communicate with the server.

Other information

Control Panel applet on client computers

When the Client Agent is deployed on a client computer, a small applet is also installed which is available via the Control Panel from your Windows desktop.

Double-clicking on the Discovery icon in the Control Panel displays information such as the client computer ID and a summary of the most recent audit information. This ID is used to identify the client computer in the Repository. If you need to visit a client computer, for example to perform a hardware upgrade, the applet allows you to check that the computer is the one whose properties you previously displayed in the Control Center.

Enabling and using the Audit Now button

When the Control Panel applet is deployed, there is no Audit Now button. However, this can be enabled by editing the CLIENT.DAT file.

Note: Changes to CLIENT.DAT must be made *before* deployment in order for the **Audit Now** button to be displayed. For more information, see the section, Explanation of Client.Dat.

Clicking the **Audit Now** button initiates an audit immediately. This audit is in addition to any scheduled audits. The results are returned in the usual way.

CSETUP.EXE command line switches

Normally CSETUP.EXE, the Client Agent installation program, is used with no command line switches. However, the following command line switches are available.

Note: CSETUP.EXE is not used to install the Multi-Platform Client, only the Client Agent.

CSetup /diag

CSETUP.EXE will always attempt to install the Client Agent on the computer on which it is running. If there are problems, CSETUP.EXE will not display any error messages so that users are not disrupted.

However, an administrator may want to know whether:

- (a) CSetup is actually running, and
- (b) if it is having problems, what they are.

The /diag switch causes CSETUP to work as normal but it will always display a message: either a success message or some information about what went wrong.

Note: If used, /diag should always be the first command line parameter so that if any following parameters on the command line are wrong the user will see a message saying so.

CSetup /reinstall

If an administrator puts CSetup.EXE in the user's login script, it will be run every time the user logs in. However, CSetup.EXE will only copy Client Agent files across the network if the files on the user's machine are not present or are out of date.

If something goes wrong with this mechanism (for example, client files exist and are up to date but are corrupt), the administrator can use the /reinstall switch to force CSetup.EXE to copy all files every time it is run. This will consume network bandwidth and should be used only if necessary.

Explanation of Client.DAT and Local.DAT

The CLIENT.DAT file is a means of communicating settings or configuration data from the Control Center to the Client Agent and is called by CSETUP.

The file is structured as a standard Windows.INI file. **Do not** edit Client.DAT except to enable the **Audit Now** button in the Control Panel applet (see the [*Control Panel Applet*] section of *Client.dat* below).

Notes

- The same file is read under both Windows and DOS environments, which may cause some problems with character sets. For example, a shared message folder name containing an accented character may look correct in Notepad but will not look the same under DOS Edit.
- On UNIX clients running the Multi-Platform Client, only the [COMMS] section of CLIENT.DAT is relevant.

The file LOCAL.DAT is created by the Client Agent and is:

- A place where the Client Agent records data that it needs to persist between restarts.
- A place where the Client Agent can communicate status information with a technically knowledgeable person, which may be useful if something goes wrong.

Note: On UNIX clients running the Multi-Platform Client, this file is used only to communicate the client message address.

A detailed explanation of some of the entries in both files is provided below.

CLIENT.DAT Entries

[ClientAgent]

Entry	Possible values	Description
StayResident	Empty, 0 or 1	<p>1 or Empty = The Client Agent loads automatically every time Windows is restarted and stays loaded checking periodically for messages from the Control Center.</p> <p>0 = The Client Agent loads automatically every time Windows is restarted and checks immediately for messages. If a message is found, it is processed and then the Client Agent terminates freeing all memory resources.</p>

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Build=<build number>		<build number> is the version number of the installed software on this client.
		If this entry is set to 1, the Client Agent will not attempt to install itself as an NT/ 2000/XP Service.
ForceAsApp=X	0, 1	where <X> is set to 1 to force the Client Agent to run as an application under Windows NT/2000/XP. If <X> is 0, the Client Agent will attempt to install itself as a Windows NT/2000/XP service. By default, <X> is 0.
Slice=<Y>		The Client Agent wakes up (to check for messages from the Control Center) every <Y> milliseconds. By default <Y>=10000, that is 10 seconds. If you want the Client Agent to take a smaller share of the processing power, increase this value, for example to 60000, to check once per minute.
SnmpCommunity n =<string>		The community name(s) entered in the Community Strings page* of the LANProbe Settings dialog, where SnmpCommunity0 is the first name, SnmpCommunity1 the second and so on and <string> is the community name.
SwitchSubnet n =<IP address/subnet>		The switch subnet(s) entered in the Switch Subnets page* of the LANProbe Settings dialog, where SwitchSubnet0 is the first subnet, SwitchSubnet1 the second and so on and <IP address/subnet> is the full subnet address e.g. 195.11.0.10/31.
ExcludeSubnet n =<IP address/subnet>		The excluded switch subnet(s) entered in the Excluded Subnets page* of the LANProbe Settings dialog, where ExcludeSubnet0 is the first excluded subnet, ExcludeSubnet1 the second and so on and <IP address/subnet> is the full subnet address e.g. 192.168.1.0/24. To exclude an individual IP address the subnet mask is 32, eg 192.168.1.33/32.

* See the explanation of the appropriate page in the section, *LANProbe Settings dialog*.

[Audit] Entry	Possible values	Description
------------------	-----------------	-------------

Hardware=1		These entries are only used during standalone audits.
Software=1		If AllExes=1 during a software audit, the Client Agent will open every file to see if it is executable, regardless of its filename. (See <i>Client Agent Options</i> .)
ShowProgress=1		
AllowCancel=0		
ChecksumEXEs=1		
GetVersionInfo=1		
FollowShortcuts=1		
AllExes=0		
IncludeFiles=EXE,COM		If AllExes=0 during a software audit, the Client Agent will open only those files with filename extensions specified by IncludeFiles.
RecordUsage	0	Adding the line RecordUsage=0 to the audit section of Client.DAT turns off the auditing of software usage.
FileExtensions=n	Default = 50	The Files Property Page shows a summary of disk space usage by file type. n determines the number of most used file extensions reported. All other file types are grouped as "All Others".

This section also holds the parameters set in the Computer Name Format dialog.

[COMMS]

Entry	Possible values	Description
SharedFolder		The Client Agent uses this directory to communicate with the Discovery Repository on the server. It does so by reading and writing files in the directory specified in this entry in CLIENT.DAT. The existence of a correct value in this entry is <i>vital</i> to correct operation .
SharedFolder2		Both SharedFolder and SharedFolder2 must point to the same directory but may use different routes. For example, if clients have X: mapped to \\Server\\share then these entries might be:

SharedFolder=\\Server\\share\\messages
SharedFolder2=X:\\messages

(Then, if a client is unable to use the preferred UNC path to the shared message folder, it may be able to use the alternate mapped drive path.)

[Folder Inclusions]

Entry	Possible values	Description
		Scan all folders on all drives

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Empty

0=C:\
1=D:\

Scan all folders on drives C: and D: only
(no other drives will be scanned)

0=C:\
1=D:\fred
2=D:\Sue

Scan all folders on C: and only folders called fred and sue on drive D: (no other folders on D: and no other drives will be scanned)

0=C:\
1=C:\Sue

Note that the specified folders must not be repeated. The directory sue will be scanned once when C:\ is scanned and then again as C:\sue is explicitly specified.

[USAGE]

Entry	Possible values	Description
Daily	d/D where D is 1 through 15 and d is 1 through D	An application is classed as having been used Daily when it has been used on at least d out of the last D days. For example, if Daily=3/7, than an application is classed as Daily if it has been used at least once on three of out the last seven days.
Weekly	w/W where W is 1 through 10 and w is 1 through W	An application is Weekly when it isn't Daily, but it has been used at least once in at least w out of the last W weeks, where weeks begin on Sundays.
Monthly	m/M where M is 1 through 12 and m is 1 through M	An application is Monthly when it isn't Daily or Weekly, but it has been used at least once in at least m out of the last M calendar months.

Note: There are two other possible values for Software Usage: Occasionally and Never. There are no settings in Client.DAT for these. For more information see *Software Properties page*.

[Control Panel Applet]

Note: Changes to CLIENT.DAT must be made *before* deployment in order for the **Audit Now** button to be displayed.

Entry	Possible values	Description
AllowAuditNow	0 or 1	<p>0 = Audit Now button is not displayed.</p> <p>1 = The Audit Now button is displayed in the Control Panel applet and can be used to initiate an audit. For more information</p>

see Control Panel applet.

LOCAL.DAT Entries

[Discovery Client]

Entry	Possible values	Description
ComputerID	Example: CE820000-0000389A - C92C00C0-4F515A01	This is the unique identification number assigned to this client by the Client Agent.
Notes		
It is not possible to change the Client ID of a client computer by editing this number in LOCAL.DAT.		
On Windows 95 and above, the preferred method of displaying the Client ID is via the Discovery applet installed in the Windows Control Panel of each client.		

Removing the Client Agent from a computer

From the Control Center, you can remove the Client Agent from one or more computers .

To remove the Client Agent

1. Navigate the Tree Control to display the computer(s) that you want to remove the Client Agent from in the Contents Window.
2. In the Contents Window, select one or more computer(s) by clicking.
3. From the **File** menu, select **Client** and then **Remove Client Software**.
4. The Request Client Removal dialog is displayed showing the computer(s) that you selected.
5. Check that you selected the correct computer(s) and click **OK**.

The Client Agent is removed and a confirmation message returned. The status of the computer is then updated to Client Software Removed.

All the information about the computer remains in the Repository and available in the Control Center.

Note : If the Client Agent was deployed via a login script, then it will be re-deployed. Update the login script to prevent this happening.

To remove an incomplete Client Agent

This procedure is only required in the rare circumstances that the Client Agent did not deploy fully and only applies if you deployed the Client Agent using the **Deploy to Windows NT/2000/XP** option.

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From the Tools menu, select Remove Client Agent, Remove From Windows NT/2000/XP Computers and then the method you want to use.

There are four methods to choose from;

1. Browse a domain

This method will display all the computers in a selected domain. The computers to have the client agent removed should be checked. Hidden computers are not visible in the list but can be added to it by clicking the 'Hidden...' button and then entering the names of the hidden computers.

2. Import a list file

This method allows one or more text files to be imported into the list of computers to have the client agent removed. All computers in the list will have the client agent removed. The list can be edited manually to add or remove computer names. The files that are imported should be ASCII text files, with one computer name per line.

3. Specify an IP address range

This method allows one or more IP address ranges to be entered into the list. The address range is made up of a start and end address or calculated via a subnet mask. If a range is entered incorrectly it can be removed by selecting it and then clicking the 'Remove' button. Every address in the range will have the client agent removed.

4. Enter computer names

This method presents an empty list where computers should be entered one per line.

Additional Options

Once a method has been selected you can choose additional options from within the deployment dialog.

The 'Advanced' button

Clicking the 'Advanced' button allows you to set the share name to use, the default is C\$.

Note: If the Client Agent does not get removed from all the selected client computers, re-run this procedure again at a later date.

Manually Removing the Multi-Platform Client (MPClient)

Method 1:

On the computer upon which the MPClient is installed, execute the following command:
`/usr/centennial/audit/cagent --uninstall`

Method 2:

- Mount the Discovery Client Files Folder as an NFS share. For example:
`mount disco_server:/clientfiles /mnt`
- Execute the `remove_mpclient.sh` shell script, specifying the platform of the computer you are running on. For Example:
`cd /mnt
./remove_mpclient.sh hpxx_parisc`

Using the Discovery Terminal Agent

Discovery includes a 'Terminal Agent' that can be used to audit software that is available to a user through a Windows 2000 Terminal Server or a Citrix Metaframe client session.

Notes

- Windows NT 4 Terminal Server is not supported currently.
- To use the Terminal Agent the user must access the Terminal Server from a PC that is capable of running the Discovery Client Agent. "Thin clients" are not supported.

Overview

The Terminal Agent is a self-contained executable file (TAGENT.EXE) that should be run from the login script of users who access software through a terminal client session to either a Windows 2000 Terminal Server or a Citrix Metaframe Server.

To avoid the Terminal Agent being run when users log on to their local PC, the following line should be added to the login script. Then TAGENT.EXE only runs when the user logs in to the Windows 2000 Terminal Server or Citrix Metaframe Server:

```
if not "%CLIENTNAME%"=="\"\\path\\TAGENT.EXE
```

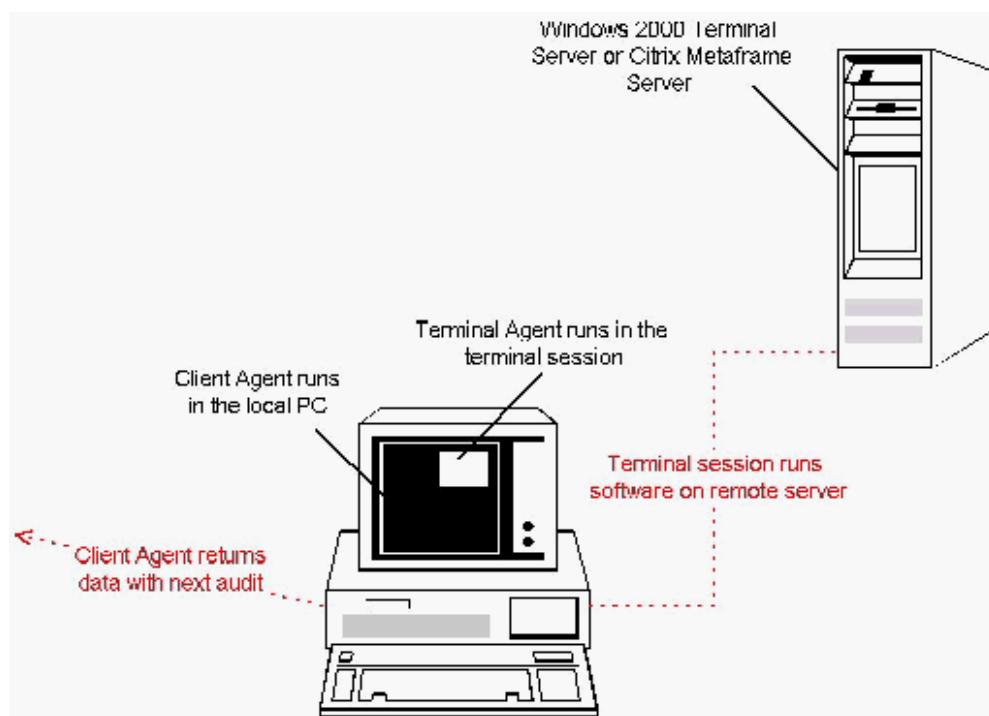
The Terminal Agent is installed to the same directory as the Client Agent files, that is, to the Client Files folder. However, this file can then be moved to any server and/or folder - but it must be in a folder that is visible to all the users who need to run it via their login scripts.

If this folder is \\Servername\\DiscoClient the line of code to be added to the login scripts is:

```
if not "%CLIENTNAME%"=="\"\\Server\\DiscoClient\\TAGENT.EXE
```

After it is started, the Terminal Agent audits the software that is visible to the user through the terminal window and communicates this information to the Discovery Client Agent that is running on the local PC. The Terminal Agent remains resident in the terminal session to gather software usage data (that is, the software actually run during the session) but this can be turned off. See */NOUSAGE command line option* below.

The data gathered by the Terminal Agent is included in the next audit performed by the Client Agent on the local PC. It is shown as part of the software on the local PC but with a network path to distinguish it from local software.



Windows 2000 Terminal Server

Unlike in Citrix Metaframe, software running in a terminal session to a Windows 2000 Terminal Server cannot see the PC's local disk drives. To allow the Terminal Agent to communicate with the local Client Agent, an extra DLL, VCHAN32.DLL must be deployed with the Client Agent software. (This DLL is installed in the Client Files folder as part of Discovery.)

To add the VCHAN32.DLL to the Client Agent distribution, the following lines need to be added to the CSETUP.INI file (which includes the list of software to be installed on client computers by the Client Setup program CSETUP.EXE):

```
[main.win32]
15=VCHAN32.DLL
[push.service]
15=VCHAN32.DLL
[zipup.email]
15=VCHAN32.DLL
```

To install the VCHAN32.DLL so that it is loaded when the Terminal Client loads, an entry under the HKEY_CURRENT_USER key must be created in the registry. Under Windows 95/98/Me this is performed by the Discovery Client Agent.

However, under Windows NT/2000/XP the Client Agent cannot access the HKEY_CURRENT_USER registry key. The VCHINST.EXE executable must be used to create the entry. Under these operating systems, the following entry must be added to a user's logon script to run VCHINST and create the required registry entry:

```
if "%CLIENTNAME%"=="\"\\Server\DiscoClient\VCHINST.EXE
```

Note: Both VCHINST.EXE and TAGENT.EXE are run from the user's logon script. But unlike TAGENT.EXE, VCHINST.EXE runs when the user logs in to their local computer.

/NOUSAGE command line option

By default, the Terminal Agent remains running in the background while a terminal session is active so that it can gather usage data. This uses terminal server memory, which may be undesirable on a server which is used heavily.

The /NOUSAGE option forces the Terminal Agent to terminate after it has performed the initial scan of available software. Software usage data is not gathered.

```
if not "%CLIENTNAME%"=="" \\path\TAGENT.EXE /NOUSAGE
```

Notes:

- Software audited through the Terminal Agent is included in the total count of Installed Copies and can be used as a comparison for the purposes of tracking Available Licences.
- Software audited through the Terminal Agent is included in usage counts if usage tracking is enabled.
- Software audited through the Terminal Agent is shown as 'Terminal' in the Accessed Via column in software folders.

Ad-hoc Administration Tasks

Administration tasks

In addition to the everyday running of Discovery to audit your company's computers, there are a number of administration tasks that you will need to perform from time to time. For more information, see the appropriate section.

- Backing up the Repository
- Restoring the Repository from a backup
- Purchasing additional Discovery licenses
- Running the Control Center from the command line
- Using the Run menu option

Backing up the Repository

As a security measure, it is wise to back up the contents of the Repository on a regular basis. Follow the instructions below.

To back up the Repository

1. From the **File** menu, select **Backup Repository**.
The Backup Repository dialog opens.
2. Browse and select a network directory and filename to back up to.
3. Click **OK**.

The Repository files are copied to the specified drive.

Restoring the Repository from a backup

If you have taken a backup of the Repository to a network drive, it can be restored.

After restoring the Repository files, you must resynchronize client computers; otherwise the audit data stored on the client computers may be out of step with the data stored in the Repository. This occurs automatically for all the client computers that are audited by a Schedule. However, any computers that are only audited on request must be synchronized manually by requesting an audit.

To restore the Repository

1. From the **File** menu, select **Restore Repository**.
The Restore Repository dialog opens.
2. Browse and select the network directory and file to restore from.
3. If the Repository is not in the default folder (C:\msde2000\data), select the check box 'Specify the database location' and browse for the directory. See *What Happens During Installation*.
4. Click **OK**.
The Repository files are copied from the specified drive.
5. Request an audit of all computers that are not audited by a schedule. See *Requesting an audit on demand*.

When the audit is performed the audit data is synchronized.

Purchasing additional Discovery licenses

The license to use Discovery specifies the maximum number of client computers that you can audit. If this number is exceeded, newly discovered computers are shown grayed and with a status of Unlicensed. You can also be alerted, depending on the Alert options you set up. For more information, see the Alerts section.

Also, the About dialog from the Help menu tells you how many licenses you have used and the number available.

You can purchase additional licenses and then register them from the Help About dialog. Contact your Discovery reseller.

To register additional licenses

1. From the **Help** menu, select **About Discovery**.
The Help About dialog is displayed showing the Discovery version and registration details.
2. Click **License Info**.
The Update Discovery Licensing dialog is displayed.
3. Type in the new license number and click **OK**.

The license number is validated and your organization's Discovery license updated.

Notes

- When the number of licensed computers is exceeded, any new computers are registered in the Control Center with the status Unlicensed. When you update the license, the status of these computers is changed to Registered.
- Discovery is licensed for use with a maximum number of computers. The license for a deleted record is not cleared until the computer is removed from the Recycle Bin.

Running the Control Center from the command line

The following administrator tasks can be performed from the command line as well as from the Control Center.

- Deploying the Client Agent to Windows NT/2000/XP computers
- Requesting an audit of all computers
- Backing up the Repository
- Exporting data

Each of these functions is described below.

(To run these operations from within the Control Center, see *Deploying via a direct network connection*, *Requesting an audit on demand*, *Backing up the Repository* and *Exporting Data* respectively.)

Deploying the Client Agent to Windows NT/2000/XP computers

This is the equivalent of selecting **Deploy Client Agent** and then **Deploy As Windows NT/2000/XP Service** from the **Tools** menu and therefore cannot be used to deploy the Client Agent to Windows 95/98 or Unix computers.

1. At the command prompt, enter the following command:

SADMIN <switches>

There are a number of command line switches that can be used, as described below and some examples are provided.

2. The Control Center deploys the Client Agent to the specified computer(s). The Deployment progress dialog is displayed while deployment occurs. Information about the deployment is output to the file *sadmin.log*.

Available Switches

The following command line switches can be used when you deploy the Client Agent from the command line.

/c:<computer>	<computer> is the name of the computer to deploy to
/c:@<listfile>	<listfile> is a text file of computer names, one per line to deploy to. This allows you to deploy the Client Agent to several computers with just one command. You must include the @. Note: If you use this switch, then the following switches must apply to all the computers listed in the file. For example, with one command you can deploy to more than one computer using this switch provided that they are all in the same domain.
/cd:<domain>	<domain> is the domain that the computer or computers are in. If you do not specify this switch, the current domain is assumed
/cs:<sharename>	The name of the share to deploy on to the target computer(s). The default is c\$
/cu:<username>	<username> is only required if the computer is on a different domain to the one you are currently logged on to

	and is the username to be used to connect to the computer or computers. If you do not specify a username, the current username is used
/cp:<password>	<password> is the password for the username specified with the /cu switch
/su:<username>	<username> is the username of the service account to use to create the service. If you do not specify a username the LocalSystem account is used
/sp:<password>	<password> is the password for the service account specified with the /su switch

Examples

The following are some examples of deploying the Client Agent from the command line.

sadmin /c:support

Deploys the Client Agent to a computer called 'support'.

sadmin /c:@domain1.lst

Deploys the Client Agent to the computers listed in the file called 'domain1.lst'

sadmin /c:support /cd:domain1 /cu:administrator /cp:adminpassword

Deploys the Client Agent to the computer called 'support' in the domain 'domain1' and uses the administrator's account in that domain to connect to the computer.

sadmin /c:@domain1.lst /cd:domain1 /cu:administrator /cp:adminpassword

Deploys the Client Agent to the computers listed in the file called 'domain1.lst' in the domain 'domain1' and uses the administrator's account in that domain to connect to the computer.

sadmin /c:win_nt /su:fred /sp:password

Deploys the Client Agent to a Windows NT computer called 'win_nt', enabling network shortcut support. The local account 'fred' has network access enabled.

sadmin /c:win_nt /cd:domain1 /cu:administrator /cp:adminpassword /su:fred /sp:password

Deploys the Client Agent to a Windows NT computer called 'win_nt' in the domain 'domain1' and uses the administrator's account in that domain to connect to the computer and the local account 'fred' for the service to run.

Requesting an Audit of all Computers

The Control Center is run from the command line to request an audit for all computers in the Repository. This is the equivalent of selecting the Company Root Organizational Unit and using the **Request Audit** option from the **File** menu. A full (hardware and software) audit of all the computers in the Repository is performed as soon as they are available - see *What "As soon as available" means*. (The name of the Company Root Organizational Unit will have been changed to your company's name when Discovery was set up - see *What happens during installation*.)

- At the command prompt, enter the following command:

```
sadmin /R
```

Note: There are no spaces between the control parameters.

2. The Control Center updates the Repository and then exits.

Backing up the Repository

You can run a backup from the command line using one of the following commands:

sadmin /b

Backs up the Repository to the same directory as used previously with a default filename of the date, for example 2003-3-17.bak

sadmin /b:<path>

Backs up the Repository to the specified path and file, for example sadmin /b:c:\temp\repository.bak.

Exporting Data

The Control Center is run from the command line to export Repository data.

1 At the command prompt, enter the following command:

```
sadmin /X[n] [/O:pathname]
```

for example:

```
sadmin /x1 /O:C:\output.csv
```

Where:

- n is the internal index of the required export
- pathname is the directory and filename to which the exported data file will be written.

2 The Control Center performs the export and then exits.

Using the Run menu option

The Run menu option allows you to run external programs from the Control Center, using information in the Repository as parameters to the program being executed.

The Run menu option is defined in the configuration file RunMenu.dat, which is found in the same directory as the Control Center. If there is no RunMenu.dat file present in the directory, no Run menu option appears in the Control Center.

If set up, the Run menu option appears in two places:

- In the context menu for any computer(s) you select in the Control Center.
- In the **File** menu under the **Client** submenu.

You can edit the configuration file using Notepad or a similar text editor.

Note: The Run menu configuration is cached when the Control Center is loaded. If you edit the configuration file, restart the Control Center for the changes to take effect.

How to add a Run menu item

There are two parts to updating in the RunMenu.dat configuration file.

1. In the section [Menu.Items], type the name of the item you are adding. It should begin with the next number in the list and the name must be unique.
2. Add an item section, with the name that you added to the [Menu Items] section.
The item section has the following entries:

```
[Section]
MenuEntryString = Ping an IP address
Command = ping
Parameters = <IPAddress1>
Wait = 1
```

where:

[Section] is the section name, which must match an entry the [Menu.Items] section.
MenuEntryString is the string that will appear on the 'Run' menu.

Command is the name of the program to execute. The program must either be in the path or have a full path name.

Parameters are the parameters to pass to the program. These can include the items listed in Control Center Parameters below.

Wait is a flag. Set this flag to 1 if the Control Center should wait for the program to finish, and 0 for it to continue.

Control Center Parameters

The following parameters can be used in the Command and Parameters entries in the item section of the configuration file. When the program is executed, the parameter is replaced with the corresponding value from the database record. Each parameter should be entered as it appears below, including the angle brackets.

<IPAddress1>	First IP address
<IPAddress2>	Second IP address, if present
<IPAddress3>	Third IP address, if present
<MACAddress1>	First MAC address
<MACAddress2>	Second MAC address, if present
<MACAddress3>	Third MAC address, if present
<NetworkUserName>	Network username
<NetworkDomainName>	Network domain name
<NetworkComputerName>	Network computer name
<FullComputerName>	The Repository name of the selected item
<*CI*CustomInfoFieldName>	Replace "CustomInfoFieldName" with any Custom Information field name

What Happens when the Command is run

The command entry is passed to a Windows ShellExecute "open" function call. This means that a valid filename in the command entry will be executed; however, this also means if, for example, the command entry is a HTML file, Windows will open the file in your Internet browser.

Auditing Computers

Audits

An audit provides information about the servers and computers in your organization. The results of an audit are stored in the Repository and viewed in the Control Center. As you perform more audits, the results build up as an audit history, so that you have a picture of changes over a period of time.

Automatic or manual audits

You can automate the process by setting up any number of audit schedules. The schedule determines when the audit is performed (for example, weekly on a Monday) and what information will be gathered by the audit. The audit schedule can then be attached to one or more computers, or to all the computers in an Organizational Unit or location, as required by your company procedures.

For more information about performing audits automatically, see *Audit Schedules*.

Auditing on demand

You can audit one or more computers at any time (in addition to an initial audit - and, in addition to, or instead of, using audit schedules). See *Requesting an audit on demand*. When you select to audit a computer, its status is set to Audit Requested and the audit is performed as soon as the computer is available - see *What "As soon as available" means*.

The initial audit

You can perform an audit when the Client Agent is installed by selecting options in the Audit Options page of the Client Agent Options dialog. For more information see the *Audit Options page*.

Prompting for user feedback

You can prompt the user for information. You determine the information that you want to gather (see *Gathering Custom Information from Users*). This information gathered is displayed in the Custom Information page of the computer's property dialog, and can be queried on.

Results of an audit

The first time that an audit is performed on a computer, all the information is returned and stored in the Repository. Subsequently, only the differences from the last time are stored. This provides a complete audit history while ensuring that the Repository remains at a manageable size.

The data returned from an audit is added to the Properties of the computer. Therefore, to display the results of an audit, you display the appropriate Properties page.

- The General, System and Software pages show the current properties of the computer.
- The Files page shows disk space usage by file type extension.
- The History page shows the previous audits. The hardware and software found to be added and removed at each audit can be displayed.
- The Location page shows the physical location of a computer as detected by LANProbe, and the dates of all previous locations.
- The Custom Information page shows the information gathered from the computer's registry and user input screen.

Canceling an audit

At any time, when a computer has a status of Audit Requested (that is, between requesting the audit and the results of the audit being returned), you can cancel the audit. See *Cancelling an audit*.

Remote users

Computers that dial in to the network can be audited by email. See *Auditing by email*.

Remote Servers

For more information about auditing a remote server, see *Auditing a remote server*.

Non-networked computers

Discovery also allows you to audit standalone or non-networked computers. See *Auditing a Standalone Computer*.

Selecting file types to scan for

An audit scans for all the .exe and .com files on a client computer and also scans for other file types with the results being shown in the Files Property Page. For specific explanations, see *Explanation of Client.DAT and LOCAL.DAT*.

Using Audit Schedules

Audit schedules

A schedule allows you to automate the frequency with which you audit one or more Organizational Units or individual computers. For example, you may like to audit weekly or monthly. Equally you may audit the different areas of your organization with different frequencies.

Discovery makes it easy to set up any number of schedules by using the Create Schedule wizard.

Schedules are stored in the Schedule folder. This is displayed in the Control Center in the Tree Control.

Notes

- All computers running the Client Agent can be audited using a schedule.
- Additionally you can audit one or more computers on demand using the **Request audit** option from the **File** menu. See *Requesting an audit on demand*.

Attaching Schedules

A schedule can be applied to one or more computers in a number of ways. See *Attaching a schedule*:

When a schedule is attached, it is downloaded to the client computers and stored there. This means that the schedule runs according to the local date and time. For example, if you set up a schedule to run at 10 o'clock daily and attached it to two computers in London and Paris, the computer in Paris would be audited first each day and the one in London would be audited an hour later, when it is 10 o'clock local time in London.

Schedules can be updated as required.

Creating a schedule

Discovery makes it straightforward to create schedules by using the Schedule wizard. A schedule automates the process of performing audits. The same schedule can be used by one or more Organizational Units and/or computers.

To create a schedule

1. In the Tree Control, click on the Schedules folder to select it.
2. From the **File** menu, select **New** and then **Schedule**.
The Create Schedule wizard is displayed.
3. Complete the wizard dialogs using the instructions displayed.
The new schedule is created and displayed in the Schedules folder.
4. To use the schedule, you must attach it to the Organizational Units, locations and/or computers that you want this schedule to apply to. See the next section.

Send an Audit report even when no changes are discovered

This checkbox in the Create Schedule wizard is selected by default. This means that even if a computer has not changed since the previous audit, a report is still returned to the Repository and an entry made in the History properties page showing the date that the audit was performed. This is important if you want to maintain a complete audit trail.

Attaching a schedule

You can attach a schedule to one computer or to all the computers in an Organizational Unit.

- **To one computer**
- **To all the computers in an Organizational Unit**
- **To all the computers in a location**
- **Emailed to a remote computer**
- **Automatically** - a computer moved to an Organizational Unit that has a schedule attached, is automatically assigned that schedule. For instructions about moving a computer, see *Moving a computer between Organizational Units*.

Note: When a computer is moved to an Organizational Unit that has a schedule attached, that schedule is automatically attached to the computer and you do not need to do this manually. For instructions about moving a computer, see *Moving a computer between Organizational Units*.

- The *General properties* page shows which schedule (if any) is attached to a computer. See *General properties* page later in this document.

Note: Only one schedule can be associated with one computer at any time, although you can perform on demand audits at any time on a computer that has a schedule attached.

To attach a schedule to an Organizational Unit or computer

1. Navigate the Tree Control to display the Organizational Unit or computer that you want to attach a schedule to.
2. Click on the item to select it.
3. From the **File** menu, select **Client** and then **Add Schedule**.
The Select Schedule dialog is displayed.

4 Do one of the following:

- Select an existing schedule from the drop-down list and click **OK**. Go on to step 5.
- Click the new button and see the previous section.

A confirmation dialog is displayed.

5 Click **OK**.

The status of the selected computer(s) is changed to Schedule Update Pending. The schedule is sent to the Client Agent on the selected computer(s). When each computer is updated with the schedule, a confirmation message is returned and the status is updated to Audit Scheduled in the Control Center.

These computers will now be audited as defined by the schedule you attached according to the *local* date and time. Also see *What "As soon as available" means*.

Removing a schedule

You can remove a schedule from one computer or from all the computers in an Organizational Unit.

To remove a schedule from an Organizationa l Unit, location or computer

1. Navigate the Tree Control to display the Organizational Unit or computer that you want to remove a schedule from.
2. Click on the Organizational Unit or computer to select it.
3. From the **File** menu, select **Client** and then **Remove Schedule**.
The Remove Schedule Confirmation dialog is displayed.
4. Click **OK**.

The status of the selected computer(s) is changed to Schedule Change Pending. A cancellation message is sent to the Client Agent on the computer(s) and the schedule is removed as soon as the computer(s) are available. For more information see *What "As soon as available" means*.

When each computer has removed the schedule, a confirmation message is returned and the status is updated to Registered in the Control Center.

Updating a schedule

You can modify a schedule at any time. Follow the instructions below.

To update a schedule

- 1 In the Tree Control, click on the Schedules folder to select it.
- 2 Right-click on the schedule that you want to modify.
- 3 From the context menu, select **Properties**.
The Schedule Properties dialog is displayed with the General page open.
- 4 You can now:
 - Display the Occurrence property page by clicking on the appropriate tab.

- Change the properties on each page as appropriate.
- Close the Properties window by clicking **OK**.

The Updating Computers dialog is displayed while the schedule is updated and those computers that use this schedule are enumerated. The status of these computers is changed to Schedule Update Pending and the new schedule sent to these computers. The Updating Computers dialog is then closed.

Subsequently, when the Server Agent receives a message from each of these computers that the client computer copy of the schedule has been updated, the status of the computer is updated to Audit Scheduled.

Renaming a schedule

You can rename a schedule at any time. Follow the instructions below.

To rename a schedule

1. In the Tree Control, click on the Schedules folder to select it.
2. Click on the schedule that you want to modify.
3. From the **File** menu, select **Rename**.
4. Type in the new name for the schedule.

Deleting a schedule

You can delete a schedule at any time. The schedule is deleted from all computers that have the schedule attached. Follow the instructions below.

To delete a schedule

1. In the Tree Control, click on the Schedules folder to select it.
2. Right-click on the schedule that you want to delete.
3. From the context menu, select **Delete**.
The confirmation dialog is displayed.
4. Click **Yes** to delete the schedule.

The status of all computers that had this schedule attached is changed to Schedule Update Pending. When the schedule has been removed, the status reverts to Registered.

Requesting an audit on demand

You can request that one or more computers be audited on demand. This manual procedure can be used in conjunction with Audit Schedules.

The number of computers that can be audited is completely flexible. You can select a single computer or an Organizational Unit or location. If you select an Organizational Unit or location, all the computers in the Organizational Unit or location *and* in any sub-folders will be audited.

In this way you can audit every networked computer by selecting the Company Root Organizational Unit. (The name of the Company Root Organizational Unit will have been changed to your company's name when Discovery was set up - see *What happens during installation*.)

To request an audit

- 1 Navigate the Tree Control to display the Organizational Unit or location that contains the computer(s) that you want to audit.
- 2 If necessary, select the computer(s) to be audited.
 - Click on an entry (subfolders or computer) to select it.
 - Hold down the SHIFT key and click on two objects to select these two entries and all the entries between them.
 - Hold down the CTRL key and click on individual entries to select only those entries that you clicked.
- 3 When the computers that you want to audit are highlighted, from the **File** menu, select **Client** and then **Request Audit**.
The Request Audit dialog opens listing the computers that you selected.
- 4 Do one of the following:
 - If the list is correct, go on to step 5.
 - To change the list of computers, click **Cancel** and return to step 2
- 5 Select the type(s) of audit to be performed by checking the check boxes: Hardware, and Software audits are available.
- 6 If you want to prompt the user for information by displaying the Customizable User Input dialog, select the check box, Gather custom data. (For more information about setting up the Customizable User Input dialog, see *Gathering Custom Information from Users*.)
- 7 Click **OK**.

The status of the selected computers is changed to Audit Requested and the Contents Window is updated to reflect the change. All computers which have an audit requested that are currently connected to the network will carry out the audit immediately. Other network computers will be audited when they next connect to the network.

To view the results of an audit on a particular computer, display the Properties dialog. See *Displaying the properties of an audited computer*.

(When the status is Audit requested, you can stop an audit being performed. See the next section.)

Manually canceling an audit

You can cancel a request to perform an audit on one or more computers.

To cancel an audit

- 1 Navigate the Tree Control to display the Organization Unit or location that contains the computer(s) that have an audit request that you want to cancel.
- 2 If necessary, select the computer(s).
 - Selecting is the same as any in standard Windows product:
 - Click on an entry to select it.
 - Hold down the **SHIFT** key and click on two objects to select these two entries and all the entries between them.
 - Hold down the **Ctrl** key and click on individual entries to select only those entries that

- you clicked.
- 3 When the computers whose audit you want to cancel are highlighted, from the **File** menu, select **Client, Cancel Request Status**.
 - 4 The Cancel Audit dialog opens listing the computers that you selected.
 - 5 Do one of the following:
 - If the list is correct, click **OK**.
 - To change the list of computers, click **Cancel** and return to step 2.

The status of the selected computers is returned to Registered and the Contents Window is updated to reflect the change.

Auditing a remote server

You can perform a software audit on any server on your network. The remote server must be visible from the Control Center and you must have the appropriate access rights to carry out the audit.

The instructions below tell you how to do this and how to view the results.

Note: A hardware audit cannot be performed on a remote server, because the Client Agent is required locally in order to discover the full hardware information. It is not possible to detect this information remotely.

Windows NT/2000/XP servers

Windows NT/2000/XP servers can be audited in three ways:

- By deploying the Client Agent to the server. Both hardware and software audits are available in the same way as auditing a client computer.
- By performing a direct software-only audit using the **Audit Remote Server** option from the Control Center as explained below.
- By performing a standalone audit. See *Auditing a standalone computer*.

Note: In the first case, the Client Agent is copied to the server machine and installed on the hard disk. In the second case, the audit is carried out directly across the network from the computer running the Control Center.

IntranetWare and NetWare servers

Because Discovery does not support deploying a Client Agent to an IntranetWare or NetWare server, these servers can only be audited in one of the following ways:

- By performing a direct software-only audit using the **Audit Remote Server** option from the Control Center as explained in this topic.
- By performing a standalone audit from the DOS prompt. See *Auditing a standalone computer*.

To audit a remote server for the first time

1. From the **Tools** menu, select **Audit Remote Server**.
The Audit Remote Server wizard is displayed.
2. In the Welcome dialog, click **Next**.
3. Either type in the name of the remote server or click **Browse** and navigate to select the server that you want to audit.
4. Click **Next**.
5. If the server cannot be contacted a message is displayed. Try again when the server

- is available.
6. Select the server shares to audit and click **Next**.
A summary of your selections is displayed.
 7. If they are correct, click **Next**
The audit is performed.
 8. Click **Finish**.

The results are stored in the Repository. By default, the computer name for the server will be the same as the server name. See *To view the results* below.

To audit a remote server subsequently

1. In the Control Center, navigate the Tree Control to display the server that you want to audit.
2. In the Contents Window, click on the server to select it.
3. Right click on the server and select **Perform Remote Audit** from the context menu.
The Remote Software Audit wizard is displayed.
4. Complete the wizard dialogs using the instructions displayed.

The status of the server is changed to Audit Complete.

To view the results

1. In the Control Center, navigate the Tree Control to display the server that you have audited.
2. In the Contents Window, right click on the server to select it.
3. From the Context menu, select **Properties**.

The Computer Properties dialog is displayed with the General Page open.
4. You can now:
 - Display the appropriate property page by clicking on its tab.
 - Close the Properties window by clicking **OK**.

Auditing Remote computers via an IP connection

For computers that are not normally connected to the network, you can deploy the Client Agent to these computers via Email (or by posting a disk with the files on) and perform audits remotely via the IP based method of communication.

See *What Happens During Installation* to ensure you select this method of communication.

The Remote IP connection used can be any form of IP connection that allows the Client Agent to see the Server computer upon which the IP Transfer agent is running. This connection could be via the Internet through a normal ISP or via a Remote Access Server connection direct onto your LAN.

After the Agent has been deployed on a remote computer all audit information will be passed between the Server and Client without any interaction required by the user of the remote computer. The Client Agent communicates to the server via the IP Transfer Agent that should be constantly running on the server machine to which it was installed.

See also *Deploying the Client Agent Via an Email Package*.

How to Audit a Standalone Computer

Auditing a standalone computer

For computers that have no connection to the network and that do not dial in, Discovery includes a standalone program (AUDIT.EXE) which first needs to be copied to a separate diskette. For instructions, see *Deploying the Client Agent from a standalone diskette*.

(To audit a remote computer, which dials in to the network for example to send and receive email, see *Deploying the Client Agent via an email package*.)

To run the audit on each standalone computer, insert the standalone diskette and run AUDIT.EXE. (The audit is controlled by CLIENT.DAT which is included on the standalone diskette. See *Explanation of CLIENT.DAT*.)

The diskette also collects the results of the audit. To view the results, you import the contents of this Repository into the main Repository. For instructions, see *Importing audit data from a standalone diskette*

During this procedure, new computers are added to the Company Root Organizational Unit, and the properties of computers that had been audited previously are updated.

You can then view the results in the Control Center in the usual way.

Importing audit data from a standalone diskette

This procedure imports data from standalone computers. New computers are added to the Company Root Organizational Unit, and the properties of existing computers are updated. (The name of the Company Root Organizational Unit will have been changed to your company's name when Discovery was set up - see *What happens during installation*.)

To create import data from a standalone diskette

1. Put the 1.44 MB diskette containing the audit information in a floppy disk drive on your computer.
2. From the **File** menu, select **Import** then **Standalone Diskette**.
The Browse for Folder dialog opens.
3. Select the drive containing the diskette and click **OK**.
The files are copied from the diskette to the Repository. While this happens, a progress box is displayed. When the process is complete, a confirmation message is displayed.
4. Click **OK** to close the message.

The Control Center is updated to reflect any new computers.

Deleting audits for all the computers in an Organizational Unit

Audits can be deleted in two ways: either for an individual computer using the History page or for all the computers in an Organizational Unit as described below.

All the computers in the selected Organizational Unit are affected, and you can delete some or all of the audit history by entering a date. All the audits requested up to this date are deleted for all the computers in the Organizational Unit.

To delete audits for all the computers in an Organizational Unit

- 1 In the Tree Control, click on an Organizational Unit to select it.
- 2 From the **File** menu, select **Client** and then **Purge Audit History**.

The Purge Audit History dialog is displayed with the computers in the selected Organizational Unit listed.
- 3 Check that the list is correct.
 - If the list contains the computers whose audit history you want to amend, go on to step 4.
 - If you do not want to amend the audit history for all the computers in the list, click **Cancel** to return to the Control Center. (You will need to delete audits computer by computer. Either use the History page or select the computer in the Contents Window and choose **Purge Audits** from the context menu.)
- 4 Type in the date up to which you want to delete audits.
- 5 Click **OK**.

All the audits requested up to this date are deleted for all the computers in the Organizational Unit. You are returned to the Control Center.

Displaying the properties of a computer

Displaying the properties of an audited computer

Each computer has a number of properties that describe the computer's hardware and software. These properties are collected when the computer is audited and are displayed in the Properties window.

To display the properties of a computer

- 1 Navigate the Tree Control to display the computer whose properties you want to display.
- 2 In the Contents Window, click on the computer to select it.
- 3 From the **File** menu, click **Properties**.
 - The Properties window opens with the General Page open.
- 4 You can now:
 - Display the System, Software, Files, History, Location, Custom Information or Notes property pages by clicking on the appropriate tab.
 - Close the Properties window by clicking **OK**.

List of computer statuses

The following list explains all the possible entries in the computer Status field in the Control Center.

- **Unregistered:** The Client Agent is not installed on this device. (The device has been detected by LANProbe.)
- **Registered:** The Client Agent is installed on this computer
- **Audit Requested:** An audit has been requested
- **Audit Complete:** At least one audit has been completed
- **Client Remove Pending:** A 'Remove Client Agent' request has been sent to the computer
- **Client Removed:** The Client Agent has been removed
- **Schedule Pending:** A new Schedule (or Schedule Remove Request) has been sent to the computer
- **Audit Scheduled:** An audit has been scheduled on the computer
- **Unlicensed:** The computer does not have a valid Discovery license. (The maximum number of licenses was already used when this computer tried to be registered.) See *Purchasing additional Discovery licenses*.

General Properties Page

The following details are displayed in the General Properties page:

Name: The name given to the computer by the user or the Administrator. This name is generated from entries in the Computer Name Format dialog. The name can be changed in the Control Center.

OU: The Organizational Unit that the computer is in.

Type: The type of computer - for example: File Server, Network Device, Network PC, Network Portable, Standalone Portable, Printer, Remote Server, Router, Standalone PC or Switch. For more information, see the *Computer Type Manager*.

Status: The status, for example Registered. For a complete list of statuses see the *List of computer statuses*.

ID: This is the unique number for every computer audited on the network. The ID of the computer is generated from the MAC address of the computer's network card and the date and time when the first audit was performed. The ID of a standalone computer is based only on the date and time. (The ID can be displayed on each client computer as a cross check, see *Control Panel applet on client computers*.)

Last Contact Date: The date of the last message received from the computer.

Audit Schedule: The audit schedule (if any) that is attached to this computer. See *Audit schedules*.

Client Address: Discovery's internal, unique ID for this computer.

Comms Method: The method by which the Control Center communicates with the client computer: Network, Email, Diskette.

MAC Address: The MAC address of the computer.

IP Address: The current IP address of the computer.

System Properties Page

The System Properties page shows hardware and network details for the selected computer.

The following categories are displayed in the System Properties page:

Computer: The computer make, model and serial number where available.

Note: Not all of the above information is available for all makes of computer.

BIOS: The BIOS manufacturer, version and date.

Memory: The amount of Random Access Memory installed, the slot information and the memory type.

Processor: The processor type and speed.

System Devices System devices such as the bus type.

Adapter: Adapters such as network and video adapters currently installed on the PC.

Monitor: The make and model of the monitor.

Disk: All drives including hard drives and CD-ROMs.

Partition: Partitions on the hard disk. For each partition the size and current free space are shown.

OS: The operating system installed.

Network: The Username, Computer name, MAC address and IP address.

Software Properties Page

Software is divided into primary and secondary software. Primary software is software that a computer is set up to use. Secondary software is all the other software discovered on that computer.

The Software Properties page shows the software on a computer, listed in the folders:

- Primary software by Manufacturer
- Primary software by Product Type
- Primary software by Usage (see *Software usage categories* below).
- Primary software by Access: Local, Network (network shortcut) or Terminal (software run via the Terminal Server or a Citrix Metaframe client session)
- Primary unidentified software (unidentified software is software for which Discovery could not retrieve manufacturer and product information).
- The equivalent Secondary software folders for each of the above.

If you turn off the display of secondary software using the **Secondary Software** option in the **View** menu, you will only see primary software folders.

Software Usage Categories

The software usage can be any of the following:

- **Never:** The application has not been run on this computer since the date given. This is the date on which the computer was first audited by Discovery.
- **Occasionally:** The application is run infrequently and less than Monthly. The date displayed is the last time that the Discovery Client Agent saw the application running on this computer.
- **Monthly:** The application is run approximately once a month on this computer.
- **Weekly:** The application is run approximately once a week on this computer.
- **Daily:** The application is run approximately once a day on this computer.
- **N/A:** This is seen if the file is on a standalone computer or a remote server, or is a type of file for which usage is not appropriate such as a font file.

Note: The exact definitions of Monthly, Weekly and Daily are set in the Usage section of the Client.DAT file. In addition, the auditing of software usage can be turned off by adding a line to the Audit section of Client.DAT. See *Explanation of Client.DAT and Local.DAT*.

Files Property Page

The Files page displays a summary of disk space usage by file type extension. (This is total usage across all hard disks.)

By default, the list is in order of decreasing space used but you can reorder the page by clicking on the column titles.

By default the top 50 file types (in terms of disk space usage) are shown. All other file types are grouped under "All other file types". The number of file type extensions that are reported is set in the Audit section of the Client.dat file. See *Explanation of Client.DAT and Local.DAT*.

History Properties Page

The History page lists the audits performed on a particular computer. For each audit, you can display details of the hardware and software added and removed. You can also delete the audit history of a computer.

The first time that a computer is audited, all of the hardware and software discovered on that computer is included in the Added folder. This provides the "base line" from which all subsequent audits provide either added or removed information.

Note: You can hide any audits during which no hardware or software was discovered to be added or removed by selecting the Hide empty audits check box.

You can:

- Select the Hide empty audits check box to hide all audits during which no hardware or software was discovered to be added or removed.
- Click on the other folder (either Added or Removed) for this audit.
- Click on a different audit folder to view information about other audits.
- Click **Purge Audits** to remove one or more audits for this computer.

Location Property Page

The Location page lists the current and previous locations of the selected computer.

The following details are displayed.

Current location: The current location of the computer

Previous locations Locations where the computer has been located previously

Time at location: The dates between which the computer was at the selected location.

Network port: The network device and port number on that device to which the computer was attached while it was in the selected location.

Custom Information Page

The Custom Information page shows the information entered by users when the Client Agent is first installed on their computer or at subsequent audits. The Customizable User Input dialog and therefore the information prompted for is customizable. See *Gathering Custom Information from Users*.

You can also edit the information from this page, if required.

As well as information entered by the user, other information can be gathered from the client computer's registry. The Custom Information distinguishes between the two types of data by different icons. The head icon indicates a value entered by the user, the block icon indicates a value read from the computer's registry.

To edit Custom Information

1. Open the computer Properties dialog for the computer you are interested in. See *Displaying the properties of an audited computer*.
2. Select the Custom Info tab.
The Custom Information page is displayed showing any information for the computer.
3. If required, select the information you want to edit and click **Edit**.
4. Edit the fields as required.
5. Click **OK** twice.

Notes Properties Page

The Notes page is a free form page in which you can enter text relating to a computer. For example you may like to use it as a reminder of things you need to do or have done on a computer such as "Changed hard disk on 15/1/2000". Notes are limited to 3000 characters.

Discovering Physical Locations

LANProbe Settings dialog

The LANProbe settings dialog has three pages, each controlling one aspect of how LANProbe works.

When you click **OK**, changes are stored in the [ClientAgent] section of client.dat. For more information, see *Explanation of client.dat and local.dat*.

Community Strings Page

This page is used to specify one or more strings that LANProbe should try if the default community name has been changed.

- To add names, click **Add** and either type in the names (one per line) or copy and paste from a file.
- To change a name, either click on a name or click **Edit**. Then change the string as appropriate.
- To delete a name, select it and click **Delete**.

Switch Subnets and Excluded Subnets Pages

These pages are used to include or exclude subnets that LANProbe should search in addition to the one that it is running in. LANProbe does not interrogate any devices in excluded subnets.

- To add subnets to either page, click **Add** and either type in or copy and paste from a file. There should only be one entry per line.
- To change a subnet, either click on an entry or click **Edit**. Then change the string as appropriate.
- To delete a subnet, select it and click **Delete**.

Location Detection Agent

LANProbe detects the physical location of network device ports including PCs and servers, routers, switches, printers and other network device ports. If the device port is moved, you will know the new location automatically.

LANProbe identifies the network cable that each device port is attached to, so you can easily find where the device port physically resides - all from the Control Center.

Each network switching or routing device that is detected is automatically displayed in Network Ports subfolder of the Locations folder. The ports for each device are also displayed.

By setting up locations subfolders and associating these network device ports with these location folders you can display location information in two ways:

- **By location.** Locations can be expanded to display the computers and network device ports found at a particular location.
- **By network device.** The Network Ports folder can be expanded to display the switches and routers that have been detected, the ports on a device and computers and devices on a particular port. See *Displaying network devices and ports*.

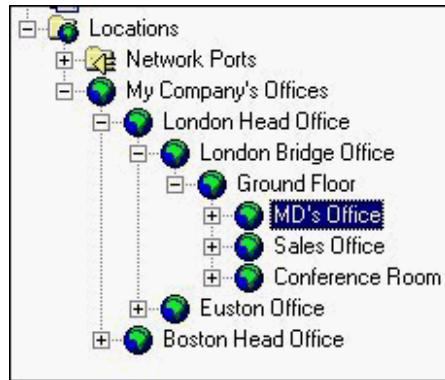
If you use community strings and switch subnets, LANProbe can be configured appropriately in the LANProbe Settings dialog. See the next section.

Note: The Locations folder shows the current location of both computers and network devices. The current location of a computer is also displayed in the *Location Property Page* of the computer's Properties dialog where the location history is also available. This shows whether the computer has been moved and the details of each previous location.

Creating a location

You can create any number of locations in the Locations folder to reflect your organization's physical locations.

A location can contain one or more sublocations.



To create a location

1. In the Tree Control, click on the Locations folder to select it.
2. If this new location will be part of a larger location, expand the tree control to display the existing location.
3. From the **File** menu, select **New** and then **Location**.
A new location is displayed in the Tree View.
4. Type in a name for the new location.

Associating a network device with a location

After LANProbe has detected all the devices on your network, you can associate each of the individual ports of an intelligent switch with one of the physical locations that you have set up. You can associate more than one port with the same location.

Because the network port information reflects the structured cabling in your buildings, this information should not change. Therefore, once a port is associated with a physical location, you can then track your network assets in a way that reflects your organization.

Detected network devices are automatically displayed in the Network Ports subfolder of the Locations folder. Follow these instructions to associate each device port with a physical location.

To associate a network device port with a location

1. In the Tree Control, click on the Locations folder to select it.
2. Expand the locations tree control to display the location that you want to associate the device port with.
3. Expand the Network Ports folder.
All detected network switches are displayed.
4. Expand the device to display its ports.
5. Click and drag the port or switch that you are interested in to the required location.
The port and all its information is associated with the location.
6. Click on the location.
The port is shown in the Contents window together with all other locations and network devices in this location.

Displaying network devices and ports

You can display information detected by LANProbe in the Locations folder. Information is displayed in two ways: by location (displaying the computers or network devices physically located in a location) or by network device port - from the network cabling view.

To display a network device and its ports

1. In the Tree Control, click on the Locations folder to select it.
2. Expand the Network Ports folder.
All detected network devices (switches and routers) are displayed.
3. Expand a network device.
The ports on the device are displayed.
4. Expand a port.
The devices (for example, computers and printers) attached to that port are displayed.

Removing a network device from a port

If a network device (a PC, network printer etc) is removed from the network and does not appear anywhere else on the same network (for example, if a PC is de-commissioned), then you can disassociate the client from the port and any associated Physical Location as follows:

To remove a network device

1. From the right-hand pane, select one or more networked devices. (Multiple devices can be selected by holding down either the Shift or Control key and selecting the desired devices.)
2. From the **File** menu, select **Client** and then **Remove from port**.

Renaming a location

You can rename a location at any time. Follow the instructions below.

To rename a location

1. In the Tree Control, click on the Locations folder to select it.
2. Click on the location that you want to modify.
3. From the **File** menu, select **Rename**.
4. Type in the new name for the location.

Deleting a location

You can delete a location at any time. Follow the instructions below.

To delete a location

1. In the Tree Control, click on the Locations folder to select it.
2. Click on the location that you want to delete.
3. From the **File** menu, select **Delete**.
The confirmation dialog is displayed. If there are any sublocations, these are listed also.
4. Click **OK** to delete the location and any sublocations.

Note: Any network device ports associated with this location are still shown in the Network Ports folder. Associate them with a new location as appropriate.

Managing the Repository

Managing objects

Discovery uses several types of objects. These are set up and managed separately.

- **Computers**
These can be client computers or servers. For more information, see below.
- **Network devices**
Any device that is connected to the network such as printers, routers, and switches.
- **Objects that are not audited**, for example a fax machine or photocopier. These objects must be set up manually. See *Manually adding a new record*.
- **Manufacturers, Software Products and Software Versions**
These objects are used to describe the software on a computer.
- **Locations**
The physical location of a computer or networked device.
- **Organizational Units and Organizational Unit Types**
Organizational Units can be used to divide the information in the Repository in any way that helps you analyze that information. For example, an Organizational Unit could be a company division such as Marketing, a cost center or a workgroup. Organizational Units can be sub-divided into smaller Organizational Units, for example, a Sales group working on a particular project.

Because you can use Organizational Units in a completely flexible way, Discovery also includes the concept of an Organizational Unit Type to help you categorize Organizational Units. Examples are Department, Division, Team or something more specific such as HR Group and Sales Office. See the *Organizational Unit Type Manager*.

Organizational Units are created, renamed and deleted using the File menu. See the appropriate section:

- *Setting up a new Organizational Unit*
- *Deleting objects from the Repository*

Computers

Computers are added to the Repository when they are first audited. They can also be added by the administrator. See *Importing data from a standalone diskette*

After a computer is in the Repository it can be:

- **Moved to the appropriate Organizational Unit.** See *Moving a computer between organizational units*
- **Renamed.** See *Rename a computer in the Control Center*
- **Deleted.** See *Deleting objects from the Repository*.
- **Associated** with a Computer Type in the General Properties Page. See *Computer Type Manager*.

In the unlikely situation that a computer is entered in the Repository under two separate IDs, you can merge the two records to retain one complete audit history. See *Merging duplicate records*.

Type Managers

Discovery uses the concept of type in three ways:

- Computer Types
- Organizational Unit Types
- Product Types

In each case you can create, edit and delete types through the dialog of the particular Type Manager.

Computer Type Manager

Computers and other devices discovered by LANProbe can be associated with a computer Type in the General Properties Page. Discovery is installed with a number of default types such as Network PC and Hub. To increase the range of entries that you can associate a device with, you can create additional types in the Computer Type Manager.

To display the Computer Type Manager from the **Tools** menu select **Type Managers** and then **Manage Computer Types**. The Manager Computer Types dialog is displayed. You can:

- Click **New** to define a new type. In the New Computer Type dialog, type in the name and select an icon for the new Computer Type.
- Click **Edit** to rename a Computer Type and change the icon associated with a Computer Type. You can rename the default types.
- Click **Delete** to delete a Computer Type that you added.

Organizational Unit Type Manager

Organizational Unit Types help you to categorize Organizational Units. Examples are Department, Division, Team or something more specific such as HR Group and Sales Office.

To display the Organizational Unit Type Manager from the **Tools** menu select **Type Managers** and then **Manage OU Types**. The Manage OU Types dialog is displayed. You can:

- Click **New** to define a new type. In the New Organizational Unit Type dialog, type in the name and select an icon for the new Organizational Unit Type.
- Click **Edit** to rename a Organizational Unit Type and change the icon associated with it. You can also rename the default types.
- Click **Delete** to delete a Organizational Unit Type but *only* if it is not in use; that is, if no Organizational Unit is associated with that Organizational Unit Type.

You can also create a new Organizational Unit Type at the same time as you create a new Organizational Unit. For more information about Organizational Units see *Setting up a New Organizational Unit*.

Product Type Manager

There are two ways to display the Product Type Manager:

- From the **Tools** menu, select **Type Managers** and choose **Manage Product Types**.
- From the **File** menu, select **Software** and choose **Manage Product Types**

You can also create a new Product Type at the same time as you assign a product to the new type. For more information about Product Types and assigning products to them, see *Product Types*.

Moving a computer between Organizational Units

You can move a computer between organizational units. Typically, you would do this:

- from the Company Root Organizational Unit to the appropriate Organizational Unit when a new computer is registered. (The name of the Company Root Organizational Unit will have been changed to your company's name when Discovery was set up - see *What happens during installation*.)
- from one Organizational Unit to another, for example, when a user moves department within your organization.

To move a computer between Organizational Units

1. In the Tree Control, select the Organization Unit that contains the computer to be moved.
2. Expand the tree until the destination Organization Unit is visible.
3. Click on the computer in the Content window and drag it to the destination Organization Unit in the Tree Control.

The computer is moved and the Control Center is updated.

Setting up a new Organizational Unit

Organizational Units can be used to divide the information in the Repository in any way that helps you analyze that information. For example, an Organizational Unit could be a company division such as Marketing, a cost center or a workgroup. Organizational Units can be sub-divided into smaller Organizational Units, for example, a Sales group working on a particular project.

Discovery also includes the concept of an Organizational Unit Type to help you categorize Organizational Units. Organizational Unit Types can be created either when you set up a new Organizational Unit (as below) or from the *Organizational Unit Type Manager*.

To set up a new Organizational Unit

1. Click on the Organizational Unit that you want to be the parent of the new Organizational Unit. (If this Organizational Unit is itself part of a larger Organizational Unit, this will involve moving down the hierarchy until the appropriate entry is displayed.)
2. From the **File** menu, select **New** and then **Organizational Unit**.
The New Organization Unit dialog opens.
3. Type in the name for the new Organizational Unit.
4. Either select the Organizational Unit Type from the list or click **New OU Type**.
5. Click **OK**.

The new Organization Unit is displayed in the Tree Control beneath its parent.

Renaming a computer in the Control Center

Every computer in the Repository is known by a name generated in accordance with the settings in the Computer Name Format dialog. See the next section. The computer name is generated by using a combination of computer name parameters that are held in the Repository. When the

parameters are changed in the Computer Name Format dialog, all the computer names are updated in the Control Center to reflect the new parameters.

However, you can enter a name in the Control Center that is stored in the Repository and used independently of the Computer Name Format dialog. The name you type is always used for that computer until you remove it. (The name is you entered is used in the Control Center and also in reports and exports.)

To rename a computer

1. In the Contents Window, select the computer by clicking on it.
2. From the **File** menu, select **Rename**.
The cursor is positioned in the name.
3. Type in the new name and press **Enter**.

The object is renamed and the Control Center display is updated accordingly.

To return a computer name to its automatically generated name

1. In the Contents Window, select the computer by clicking on it.
2. From the **File** menu, select **Rename**.
The cursor is positioned in the name..
3. Delete all the characters in the name and press **Enter**.

The object is renamed with a name in the format determined by the parameters in the Computer Name Format dialog and the Control Center display is updated accordingly.

Deleting objects

Deleting objects from the Repository

The administrator can delete computers and Organizational Units from the Repository from the Control Center. For example, if a computer is no longer used by your organization, you may want to delete the information for it - but you do not need to.

Note: Deleted objects are placed in the Recycle Bin. They can be restored until you empty the Recycle Bin.

Note: For instructions on deleting a location, see *Deleting a location*.

Deleting an Organizational Unit

You can delete an Organizational Unit that is not empty - the Delete Confirmation dialog lists all the objects (other Organizational Units and computers) in the Organizational Unit because these will be deleted at the same time. Therefore, if you do not want to delete all the computers and Organizational Units within the selected Organizational Unit, you must move them to another Organizational Unit first. For instructions about moving a computer, see *Moving a computer between Organizational Units*.

To delete an object from the Repository

Follow these instructions to delete a computer or Organizational Unit.

- 1 In the Tree or Contents Window, select the object to be deleted by clicking on it.
- 2 From the **File** menu, select **Delete**.
The Delete Confirmation dialog is displayed listing all the objects that will be deleted.
- 3 Check that you selected the correct object.
- 4 If any other objects are listed, these will be deleted also. Check the list to be certain that you are happy to delete these objects also.
- 5 Do one of the following:
 - If the correct object is listed and you are happy to delete any contained objects also, click **OK**.
 - To move any contained objects before deleting, click **Cancel**. Drag and drop any objects that you do not want to delete to other Organizational Units. Reselect the object in the Control Center and then from the **File** menu, select **Delete** again.
 - To change the object, click **Cancel**. Reselect the object in the Control Center and then from the **File** menu, select **Delete** again.

Computer Name Format Dialog

The Computer Name Format dialog page is used to build a unique name for each computer from data stored in the Repository. Each computer must be assigned a unique name to identify it later in the Control Center. This name is generated from the entries you make in this dialog.

To set up computer name options

- 1 From the **Tools** menu, select **Settings** and then **Computer Name Format**.
The Computer Name Format displayed is displayed with two list boxes.
- 2 Select any computer name parameters you want to use in the Name format field.
 - Select the parameters to use in the order that you want them to appear in the name.
 - Select a parameter by clicking on a parameter to select it and then clicking **Add**.
 - For each selected parameter, an explanation is displayed.
 - As you select parameters the name is built up in the Format field.
 - If necessary, edit the command line manually, for example to edit the !REG parameter. See the explanations below.
- 3 Click **OK**.

From now on, the options that you selected will be used for all computers that are registered subsequently and all the names are updated in the Control Center to reflect the new parameters.

Computer Name Parameters

The parameters that you can include are described below and are stored in the Client.dat file:

!DOMAIN	NT Server Domain name (<i>Windows NT/2000/XP only</i>)
!IPADDRESS	The IP address of the computer.
!MACADDRESS	The 6-byte Media Access Controller (MAC) address for the first

network card in the client computer, for example, 00-C0-4F-51-5A-01. If the MAC address is unavailable, it is expanded to all zeros: 00-00-00-00-00-00.

!MANUFACTURER The manufacturer of the computer, if available; for example, Dell.

!MODEL The model of the computer, if available; for example, Latitude.

!OS The operating system that the computer is using.

!REG The full parameter is:

!REG:"HKEY_name\subkey" "valuename"

This option can be used to extract a variable from anywhere within the Windows registry on the target client machine.

Notes:

- Only one !REG entry is allowed in the computer name.
- The !REG parameter does not apply to UNIX clients.

Example 1

!REG:"HKEY_LOCAL_MACHINE\Software\Clients\Mail"
provides the default value of Software\Clients\Mail in
HKEY_LOCAL_MACHINE.

Example 2

!REG:"HKEY_LOCAL_MACHINE\Software\Clients\Mail""Value"
provides the value of the key called Value in the sub-key
Software\Clients\Mail in HKEY_LOCAL_MACHINE.

Valid HKEYs are:

HKEY_CLASSES_ROOT
HKEY_CURRENT_USER
HKEY_LOCAL_MACHINE
HKEY_USERS
HKEY_PERFORMANCE_DATA
HKEY_CURRENT_CONFIG
HKEY_DYN_DATA

Note: Only String Values and DWORD Values are supported.

!SERIAL The serial number of the computer.

!USERNAME Login Username

!WORKSTATION Name of workstation computer

The Recycle Bin

Objects (computer, printers etc) that you delete from the Repository are placed in the Recycle Bin. They are not deleted permanently from your computer until you empty the Recycle Bin.

Restoring objects from the Recycle Bin

To restore an object from Recycle Bin, drag and drop it into any Organizational Unit.

Emptying the Recycle Bin

To empty the Recycle Bin, right-click on it in the Tree Control and select **Empty Recycle Bin** from the context menu. Click **Yes** to confirm.

Note: Deleting a computer from the Recycle Bin frees up the Discovery license for that computer.

Merging duplicate records

In the unlikely event of two computers having the same ID, the records for these computers can be merged. Follow the instructions below.

Equally, if you notice that a duplicate computer record has been created for a computer (that is, one computer is represented by two IDs in the Repository), you can merge the records and preserve the complete audit history for the older computer. This could occur if the client ID information held on the client computer hard disk is lost, for example, if the hard disk is replaced.

To merge two records

- 1 In the Contents Window, select both computer records (using **CTRL+Click**).
- 2 From the **Tools** menu, select **Merge Duplicate Records**

The Merge Duplicate Records dialog opens showing the name and IDs of both computers and which ID the merged record will retain.
- 3 You can now:
 - Click **OK** to merge the two records.
 - Click **Cancel** to return to the Control Center without merging the records.

The records are merged. The older audit history is kept and the newer record is deleted, removing the newer audit history from the repository.

Manually adding a new record

This option is used if you want to use Discovery to keep records for equipment such as fax machines and photocopiers that are not audited. Records for these objects are added from the Control Center.

To manually add a new record

- 1 Navigate the Tree Control to display the display the Organizational Unit in which the new item will be placed.
- 2 From the **File** menu, select **New** and then **Database Record**.

The New Record dialog opens.
- 3 From the drop-down list, select the type.
- 4 Do one of the following:
 - If you selected Remote Server, click **Browse** and navigate the Network Neighborhood to select the computer.
 - If you selected one of the other options:
 - Type in the Name by which this new item will be known.
 - A default ID is displayed for the item. (Client IDs must be unique.)
- 5 Click **OK** to set up the new item.

A new record is set up in the Repository for the new item of equipment and the Control Center display is updated to show the new item in the selected Organizational Unit.

Software Management

Software Folder

Software is displayed in two places within the Discovery Control Center:

- Within the Software folder, as explained below.
- In the Software Properties page for an individual computer.

The Software folder provides a convenient way to display the software installed in your company and a simple way to display those computers that have a particular software product installed.

Software is divided into primary and secondary software. Primary software is software that a computer is set up to use. Secondary software is all the other software discovered on that computer. To view secondary software, select **Secondary Software** in the **View** menu.

Primary and Secondary Software by Manufacturer

Software in these folders is grouped by alphabetically by Manufacturer, Product and Version.

By selecting various levels in the tree control you can see the following information:

- **Manufacturer:** shows all the products by that manufacturer and the defined product type.
- **Product:** shows all the versions of that product, including available licenses (see *Licensed Software and License Not Required*), installed copies and how many licenses are actually being used.
- **Version:** shows all the computers that have a copy of that version installed on them, Usage and Embedded Product ID, where available (see *Embedded Product IDs, Licenses and Locale Information*) and Accessed Via - Local, Network (network shortcut) or Terminal (software run via the Terminal Server or a Citrix Metaframe client session).

See also:

- *Primary and Secondary Software* later in this document
- *Software Usage Categories*

Primary and Secondary Software by Product Type

Software in these folders is grouped by Product Type, for example database, spreadsheet or operating system.

Discovery comes with a predefined list of software. If an application is not in this list, then it is put into the "Undefined" product type folder.

A product can be assigned an existing predefined Product Type or new Product Types can be defined. The product's Type can be changed if required.

See also *Product Types*.

Primary and Secondary Unidentified Software

Unidentified Software is software for which there is no reliable Manufacturer and Product information available.

Software in these folders is displayed as an alphabetical list of executables. For each one, you see the file name, size, and any available manufacturer, product and version information.

If you click on an executable, the computers on which this executable are installed is displayed along with usage, Accessed Via and Embedded Product ID information, where available.

If you have information about a product, you can enter it. The software will no longer be unidentified. To do this, right-click on the product and select **Identify**. The Identify wizard allows you to enter the manufacturer, product, product version and software type. If you subsequently find that some or all of this information is incorrect, you can remove the data you entered and restore the software properties to those it started with in this dialog. This is done with the **Restore** button in the Files page of the Software Version Properties dialog.

Note: Only primary software is displayed in the web control centre.

Primary and Secondary Software

All Software discovered by Discovery is divided into either a Primary or Secondary software category.

- Primary software is defined as software that a computer is set up to use.
- Secondary software is the other software discovered on that computer.

When a client computer is audited the client agent makes a decision as to whether the application should be Primary or Secondary based on various information about the client configuration. This information is then used to allocate each application into either the Primary or Secondary folder when viewed through the Control Center.

Through the Software folders view you can change whether a product is primary or secondary by selecting either **Make Primary** or **Make Secondary** either at the manufacturer level or for an individual product.

To Make a Manufacturer's products, one Product or a Version Primary or Secondary

Method 1

1. In the Tree view, select either the Manufacturer or product.
2. From the **File** menu, select **Software** and choose **Make Primary/Secondary**.

Method 2 for Products only

1. In the Tree view, select the product.
2. Right-click and select **Properties**.
The Software Product Properties dialog is displayed.
3. In the Primary/Secondary field of the Product Settings area, select the appropriate setting.

Software usage

Discovery can audit software usage. This may allow you to move an application from a computer on which it is installed but not used, to another computer in your organization (thereby saving the expense of a new license). See *How to find spare copies of a product* below.

The Discovery Client Agent constantly monitors which executables are running, even when it is not connected to the network. Over a period of time, this data can be interpreted to provide a measure of how often the software is run.

The software usage is displayed as Never, Occasionally, Monthly, Weekly and Daily. The definitions of the last three are set in the Usage section of the Client.DAT file. In addition, the auditing of software usage can be turned off either by disabling the function in the Client Agent Options or by adding a line to the Audit section of Client.DAT. For more information, see *Explanation of Client.DAT and Local.DAT*.

The software usage is displayed in a number of dialogs. It also appears in some exports and reports and can be queried. You can display the software usage in a number of places including the Software Properties page (this page displays the usage for the selected computer's software) and in the Contents Window when you click on a product version in the Tree Control.

Reporting and exporting software usage

Software usage information is also included in several reports and exports.

Querying software usage

You can set up a query to find the computers that use a particular product version with a particular frequency. To do this, select Software usage as the category in the Query wizard. Then select a manufacturer, the product and version, and finally the frequency you are interested in. For more information, see *Creating a query*.

How to find spare copies of a product

To find which computers have a particular product

1. In the Tree Control, display the Software folder.
2. Select a manufacturer.
3. Select one of this manufacturer's products.
All the versions of this product that have been discovered in an audit are displayed, as well as the number of available licenses, the number of installed copies, the number of used copies and the number of unused copies.
4. Choose the version of the software that you are interested in.
Every computer with this version is listed along with how often this version is used. A software usage of Never shows a potential spare copy. For an explanation of Never see *Software Properties page*

Product Types

All products detected by Discovery can be assigned a Product Type – by default Discovery will automatically categorise many products. You can assign products existing types or define new ones.

Allocating products to a new Product Type

Through the Software Folders view you can allocate a Product Type to any product, either at the manufacturer level (for all products by that particular manufacturer) or to an individual product.

To allocate a Type to a Manufacturer or Product

1. In the Tree view select the Software Folder.
2. Select either the Manufacturer or product, from the Primary, Secondary or Type subfolders in either the Software by Manufacturer or the Software by Type folders.
3. From the **File** menu, select **Software** and choose **Change Product Type**.
4. Select the Product Type you wish to define or define a new type by clicking the **New** button.

Allocating Multiple products to the same Product Type

You can allocate more than one product at a time to the same Product Type either by Manufacturer or by Product.

For example to assign all products belonging to Manufacturer A, Manufacturer D and Manufacturer P to the Product Type "Spreadsheets", do the following:

1. In the Tree view select the Software Folder.
2. Select Primary/Secondary Software by Manufacturer.
3. From the Contents Window, select the Manufacturers A, D and P by holding down the **Ctrl** key and selecting.
4. From the **File** menu, select **Software** and choose **Change product type**.
5. Select the Product Type you wish to define or define a new type by clicking the **New** button.

To assign a group of undefined products to the same Product Type

1. In the Tree view select the Software Folder.
2. Select Primary/Secondary Software by Product Type.
3. Select the Undefined type folder.
4. From the Contents Window select multiple products by holding down either the **Shift** or **Ctrl** key and selecting the desired products.
5. From the **File** menu, select **Software** and choose **Change Product Type**.
6. Select the Product Type you wish to define or define a new type by clicking the **New** button.

Managing Product Types

Discovery comes with a predefined list of possible product types which you can rename but not delete. Within the Control Center, you can define new Types, rename existing types or delete types that you have defined.

There are two ways to display the Product Type Manager:

- From the **File** menu, select **Software** and choose **Manage Product Types**
- From the **Tools** menu, select **Type Managers** and choose **Manage Product Types**.

Renaming a Product Type means all the products assigned that type will have the renamed type.

Deleting a Product Type will cause all products associated with that type to become type "Undefined".

See also *Software Folder* and *Software Properties Page*.

Embedded product IDs, licenses and locale information

Discovery makes a distinction between Embedded Product IDs and licenses.

- An Embedded Product ID is an automatically detected product serial or license number. Where the Embedded Product ID and locale information of an application is available in an identifiable location, Discovery will automatically return this information. (Locale information is the language version e.g. English and the locale version e.g. United States - default currency sign is dollar and spell check is US English.)

(**Note**: A lot of software manufacturers do not store this information in a standard location.)

The Embedded Product ID is then displayed for information in a number of places, for example, in the Contents Window when you select a software version in the Software Folder.

- A license is entered manually as part of a Purchase Detail record. See *Entering Purchase Details*. A Purchase Detail/license corresponds to a piece of paper authorising you to use a product and is likely to be the number you enter when you install the product. This may or may not be the same as the detected Embedded Product ID.

Of course, some software does not require a license (see the next section). For these products, the number of installations discovered is also the number of available licenses. However, this information is superseded by any Purchase Details data that you enter if and when you subsequently identify this product as requiring a license.

Locale information is included in the export 'Software + Usage by Computer'

Licensed software and license not required

Using Discovery you can distinguish between software products that require a license and those that do not, and the way that licenses are added and reported depends on which category the software product is in.

For products that require a license, the license information must be entered manually. This is done as part of the Product Details from the Licenses page of the Software Version Properties page.

It is then straightforward to find out whether your organization is compliant for licensed software in terms of the number of licenses purchased and the number of copies installed. Compliance is shown in the Control Center by icons and in reports, for example, the Software Compliance page available in the Web Control Center.

By default, all products automatically require licenses. You can change the setting and there are a number of ways to categorize products, see *Marking products as requiring licenses* below.

Compliance Icons

If you mark a product as requiring a license, the manufacturer, product and each of its versions is shown with the appropriate icon:



Product requires licensing



One or more of the manufacturer's products require licensing



Licensed software



Unlicensed software (has exceeded its licenses)

Marking products as requiring licenses

There are a number of ways to mark a product as requiring licensing:

- At the **Manufacturer** level: All the manufacturer's products will require licensing. This can be achieved by:
 - Highlighting one or more than one manufacturer in the Contents Window, right clicking and selecting the **Licensing required** option.
- At the **Product** level: All the versions of the product will require licensing. This can be achieved by:
 - Displaying the Software Product Properties page for the product and then selecting the check box 'Product requires licensing'. When Discovery is installed, this check box selected for some products but you can change the setting for all products.
 - Right clicking on the product and selecting the **Licensing required** option.
 - Selecting the product and then selecting the **Licensing required** option from the **Software** option in the **File** menu.

Software Properties Pages

The Software Properties are displayed when you select a manufacturer, product or product version from the Software Folder and then from the **File** menu select **Properties**.

The number of pages available in the dialog depends on whether you selected a manufacturer, product or product version.

GENERAL:

This page is always displayed but only the appropriate fields are active.

It shows the default manufacturer and manufacturer URL. Also the product name and product version when appropriate.

The Product Settings area is only active when you have selected a product. This is used to determine whether the product requires licensing (see *Licensed Software and License Not Required*), and, if necessary, to change the Product Type or force the product to be Primary or Secondary Software.

NOTES:

Displayed for products and product versions. You can enter text about the product or product version.

LICENSES:

This page is displayed for product versions only and concerns Purchase Details data. (A Purchase Details record relates to a piece of paper that authorises you to use a product and will specify the number of licenses included.)

There is an entry for each Purchase Detail that you have already entered for the selected product version showing the license number and the number of licenses that this includes. You can also add, remove and update Purchase Details (see *Entering Purchase Details*).

The Total Licenses field is the sum of all the licenses entered in Purchase Details for this product version.

Although Purchase Details can be entered for all software products, they are only used for products that require a license. This means that the number of available licenses shown in the Control Center will only tie up with the Total Licenses for products that require a license. See *Licensed Software and License Not Required*.

FILES:

This page is displayed for product versions only.

Lists the files are used to identify this version of the product. These have either been found automatically by Discovery or been identified manually in one of the Unidentified Software Folders.

If you find that one of the files is incorrectly associated with this product version, select the file and then click **Restore**. The file becomes unidentified software again.

Note: The restore button only works for files that were identified manually, not those automatically associated by Discovery.

Entering Purchase Details

For products that require a license, the license information must be entered manually for each product version. This is done as part of a Product Detail record in the Purchase Details dialog. There are two pages, General and Ownership. This dialog is displayed from the Licenses page of the Software Version Properties page by clicking **Add**. (See the previous section.)

(A Purchase Detail relates to a piece of paper that authorizes you to use a product and will specify the number of licenses included.)

Note: Although Purchase Details can be entered for all software products, they are only used for products that require a license. This means that the number of available licenses shown in the Control Center will only tie up with the Total Licenses for products that require a license. See *Licensed Software and License Not Required*.

The General page allows you to enter a License Number and the Number of Licenses included with this number. This is the information shown in the Licenses page of the Software Version Properties page.

The Ownership page is used to enter further details about the Purchase Detail:

- Which part of the organization (Organizational Unit) owns the licenses. The company structure is available in a drop-down list. The root Organizational Unit is selected by default. The owning OU is important when you are using the Web Control Center to produce Software Compliance reports. See *Ownership of Licenses* below.
- Date of Purchase and Purchase Number. This information is optional.

Ownership of licenses

A license is owned by a particular part of an organization - one of the Organizational Units that you have set up for your company. The Organization drop down list in the Ownership page of the License Properties dialog shows all OUs in your organization starting at the root OU (the top level or company as a whole).

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The licenses must be assigned to one of these OUs. By default the root Organizational Unit is selected.

It is vital that you assign the licenses at the correct level because the organizational structure is taken into account when calculating the number of available licenses in the Web Control Center. In the Web Control Center's Software Compliance page, the Licenses column shows the sum of all the licensable software at or below the currently selected OU. This is the sum of all Purchase Details which are at or below the current OU or are held by a direct ancestor of the OU in the organization structure.

Example

For example, an organization is split into two OUs, Asia and Europe. Ten licenses are purchased at company level, 20 belong to the Asia OU and 15 to Europe. Then if you report:

- At company level, the total licenses are 45
- On the Asia OU, the total licenses reported is 30
- On the Europe level, the total licenses reported is 25.

This is because licenses assigned to the root of an organization can be used anywhere within the organization but those assigned at a particular OU can only be used at that level or below.

Using Queries

Queries

A query allows you to interrogate the Repository in a meaningful way to analyze information about your company's computer and network assets.

For example, you may like to set up a query that:

- lists all computers from a particular manufacturer.
- lists all computers with a particular software package installed.

Discovery makes it easy to set up any number of queries and existing queries can be updated, as required.

Queries are stored in the Queries folder. This is displayed in the Control Center in the Tree Control. When you run a query, the results are displayed. The results can be printed or exported in a report in comma separated value (csv) format for use in another application (see *Printing Reports* and *Exporting Data*).

Quick Queries

There are two ways to set up a query, either as a full query or as a quick query. There is no difference in the resulting queries in terms of how they are run or in the way that data is reported; the two methods are purely for convenience.

The advantage of quick queries is that you can define everything on one dialog; however, you cannot set up such flexible queries as you can with a full query, which is defined through the Query Wizard. It will not take long to get used to both methods and work out which one you want to use in each situation.

Nested Queries

Queries can be nested so that a number of queries can be run in sequence. Nested queries are shown as sub-queries in the Queries folder. Quick queries can be sub-queries of full queries and vice-versa.

Any number of sub-queries can be produced. For example a three level nested query may be:

1. A query to list all the computers with more than 64 MB of memory.
2. Within this query you may create a query that lists all the computers with more than 200 MB of free space on a partition.
3. You may also have a query that lists all the computers running Windows 2000.

If you select query 3, in fact query 1 is run first. Then query 2 is run only on those computers found in query 1 and finally query 3 is run on the subset of computers satisfying both query 1 and 2. The resulting list is all the audited computers that have more than 64MB of memory, more than 200 MB of free space on a partition and are running Windows 2000.

Note on nested queries To create a nested query, you first create the individual queries. Then drag and drop the relevant queries on top of each other to create sub-queries.

Creating a query

You can create any number of queries to help you analyze the information stored in the Repository. You can query on General, System and Software properties, as well as Embedded Product ID, Software Usage, Filename, Product Type, File Type, 'What's Changed' and Custom Information. You can also create nested queries to run queries in combination. See *Nested Queries* previously in this section.

When you set up a query you define the query parameters. You can then search on the computers that match those parameters, or those that do not match the parameters. For example, if you set up a query to look for all Pentium II computers, you could change this to find all the non-Pentium II computers by ticking one check box.

Quick Queries

There are two ways to set up a query, either as a full query or as a quick query. Only System queries and most General queries (with the exception of Location, Organizational Unit and Operating System queries) can be set up as a quick query.

The advantage of quick queries is that you can define everything on one dialog; however, you cannot set up such flexible queries as you can with a full query, which is defined through the Query Wizard. It will not take long to get used to both methods and work out which one you want to use in each situation.

To create a query

- 1 In the Tree Control, click on the Queries folder to select it.
- . .
- 2 If you are creating a nested query, select the query from which you want to create a new sub-query.
- . .
- 3 From the **File** menu, select **New** and then either **Query** or **Quick Query**.
- . .
- 4 Do one of the following:
 - If you selected **Query**, the Query wizard is displayed. Go on to step 5.
 - If you selected **Quick Query**, the Quick Query Properties dialog is displayed. Enter a name for the query, select the parameters and click **OK**.
- . .
- 5 Select the category General, System, Software, Software Usage, Embedded Product ID, Filename, Product Type, File Type, What's Changed or Custom Information from the drop-down list.
The option you select determines the wizard pages that are displayed.
- . .
- 6 Complete the rest of the wizard and click **OK**.
- . .

The new query is created and displayed in the Queries folder. See *Running a Query*.

Copying Queries

You can copy a query by dragging and dropping the query from one part of the Tree Control to another.

Running a query

After a query has been created, it can be run any number of times.

When a query is run, the Repository is searched for all computers matching the criteria of the query and the results displayed in the Contents Window. In this way, a query always displays the most up-to-date information.

To run a query

1. In the Tree Control, click on the Queries folder to select it.
2. From the **File** menu, select **Execute Query**.
The Query Progress dialog is displayed while the query is run. When it is complete, the results are displayed in the Contents Window.

Note: If you selected a sub-query in a nested query, the queries are run in sequence. See *Nested Queries* previously in this section.

Note: The Control Center makes no distinction between Queries and Quick Queries; both are executed in the same way using the instructions above.

Updating a query

You can modify a query at any time, for example, if you want to include more information or change a parameter.

Most queries can be edited as either a full query or as a quick query (but see below). Editing a query as a full query uses the Query wizard and allows you to see all the query parameters. However, if you only want to change one or two parameters, it can seem to be time consuming.

The Quick Query option displays a dialog rather than a wizard and therefore can be a quick method to update a query. However, not all the parameters may be available (this depends on the exact query) - parameters that are not displayed retain their original value.

Which method to choose

The way in which queries can be updated depends on how they were set up:

- Queries set up as quick queries can be edited as either full queries or quick queries.
- Full queries which are System queries and most General queries can be edited as either full queries or quick queries.
- General queries that are Location, Organizational Unit or Operating System queries can only be edited as full queries. A message is displayed if you try to edit these queries with the **Quick Query Properties** option.
- All other queries can only be edited as full queries.

To update a query

1. In the Tree Control, click on the Queries folder to select it.
The current queries are displayed in the Tree Control.
2. Click on the query that you want to modify.
From the **File** menu, select either **Properties** or **Quick Query Properties**.

4 Do one of the following:

- If you selected Properties, the Edit Query Wizard is displayed. Work through the screens.
- If you selected Quick Query Properties, a dialog is displayed showing the current properties of this query. Edit the parameters and click **OK**.

Using Alerts

Alerts

Discovery can display an alert message in a number of circumstances. You select which alerts will be displayed using the Alert Options dialog.

You can also view the history of alerts received for all computers in the Alerts List - see below.

Alerts can be emailed, for example if you wish to receive alerts when you are away from the console running the Control Center. Emailing of alerts is set up in the Alert Options dialog.

Alerts List

The list of Alerts is displayed in the Contents Window. It shows all the alerts that have been received for all computers listed by date and time.

You can change the order of the list by clicking on the title of another column. For example, to display the list by computer, click on the Computer column.

Deleting Alerts

You can delete alerts:

- To delete one alert, click on the alert to select it. Then from the **File** menu, select **Delete**. When the confirmation message is displayed, click **Yes**
- To delete a number of alerts, hold down **Ctrl**, click on the alerts to select them. Then from the **File** menu, select **Delete**. When the confirmation message is displayed, click **Yes**.
- To delete the complete alerts history, right click on the Alerts folder in the Tree Control. Then select **Purge All Alerts**. When the confirmation message is displayed, click **Yes**. The Alerts folder is emptied and alerts history for all computers is deleted.
- To set the number of days after which alerts are automatically deleted, set a value in the Alert Options dialog. The default is 1 day

Alert Options dialog

The Alert Options dialog has two pages.

Alerts page

The Alerts page of the Alert Options dialog is used to select the types of alerts that you want to view.

To set alerts

- 1 From the **Tools** menu, select **Set Alert Options**.
- 2 Select when the alerts will be displayed. You can select none, either or both of:
 - Show alerts when the Control Center is started
 - Show alerts when received; that is when the alert occurs (if the Control Center is

- running)
- 3 Check the check boxes of those alerts you want to display and uncheck any that you do not want. Examples of alerts you can select from include:
 - A new computer is registered.
 - A computer's hardware has changed.
 - A computer's network settings have changed.
 - A computer's software has changed.
 - A computer's location has changed.
 - An error occurs running the Client Agent. The type of problems that could be reported include memory problems during an audit and notification that a user canceled the audit.
 - A new network device is discovered.
 - The number of Discovery licenses has been exceeded.
 - An error occurs running the Server Agent.
 - 4 Set the period after which alerts are purged. See Automatically purging alerts below.
 - 5 Click **OK**.

If you selected the Show alerts when received check box, when an alert that you selected occurs, a pop-up dialog is displayed asking if you want to view the alert. Click **Yes** to display the Alerts folder in the Contents Window.

Automatically purging alerts

To prevent the Repository becoming very large with old alerts, they are deleted after 1 day by default. However, you can change this period in the Set Alerts Options dialog. Values between 0 and 99 can be set but **BEWARE**, zero (0) means never delete alerts, in which case, the alerts history could occupy significant disk space.

Email Alerts page

You can configure the Control Center to send emails containing the alerts it receives using the Email Alerts page of the Alert Options dialog. You can:

- define the email address to send the emails to and send a test email to check that the details you enter are correct.
- define which alerts are emailed.
- set the frequency with which the Server Agent checks for alerts that need to be emailed.

Reports

Printing reports

You can report on one or more computer as follows:

- Report on one or more computer by selecting them from the Contents window
- Report on all the computers in an Organizational Unit by selecting the Organizational Unit
- Report on all the computers in a location by selecting the location
- Report on all the computers matching a query. When you run a query and select a report, the report is based on the query results - only those computers satisfying the query are included in the report.

A number of predefined reports are available.

To print a report

1. In the Tree Control, select one or more computers, an Organizational Unit, a query or a location.
2. From the **File** menu, select **Print Report**.
3. Select the report you want to print.

Exporting data

Rather than printing a report, you may choose to export data to a file on disk as a comma separated file and import it later into a spreadsheet, for example, Microsoft Excel.

A number of predefined exports are available.

To export a report

1. In the Tree Control, select either an Organizational Unit, computer, location, or query.
2. From the **File** menu, select **Export Data**.
The Export Data dialog is displayed showing the available export types in three categories; Computer Exports, Software Exports and Location Exports.
3. Select the information to export.
A short description of the export report is displayed below the list. If you know you are not interested in a category of exports, you can close the category by clicking on the minus (-) sign next to heading (Computer Exports, Software Exports or Location Exports).
4. If required, select the checkbox, **Include items found in subfolders**.
5. Click **Export**.
The Save As dialog is displayed.
6. Enter a file name to export to or Browse to select a file.
7. Click **Save**.

The data is produced and saved to the selected file.

Troubleshooting

Error Message Meanings

The error codes that can occur in Discovery are described below.

Notes The Client Setup program produces no messages unless the /diag switch is present on its command line. If used, the /diag switch should be the first parameter on the CSETUP.EXE command line. For more information, see *CSetup.EXE command line switches*.

C101: Not enough memory.

There was insufficient RAM available for the Client Setup program to function. Close any other programs and try again.

C103: Unrecognised or incorrectly formatted command line parameter at "<string>"

The Client Setup program could not interpret some part of the command line text following CSETUP.EXE. The point at which the command line parsing failed is shown in double quotes in the error message.

C105: Cannot open CSetup control file CSETUP.INI. Please contact your network administrator.

The list of files to be installed by the Client Setup program is stored in a file called CSETUP.INI. This file must exist in the same directory as CSETUP.EXE.

If CSETUP.INI is missing, you may need to reinstall the client files via the Discovery Setup program. Also check that users have full access rights to the directory containing the client files.

C109: Could not open file <filename> (<reason>). Please contact your network administrator.

The Client Setup program could not read the file <filename> which it needed to copy to the client computer. The <reason> may give further information: for example, "file not found" or "access denied", or it may give a DOS error number.

Check that users have full access rights to the directory containing the client files. You may need to reinstall the client files via the Discovery Setup program.

C110: Cannot create file <filename> (<reason>). Please contact your network administrator.

The Client Setup program must install the Client Agent on the client computer. One of the Client Agent files, <filename>, could not be copied. There are several reasons why this error may occur:

- Insufficient disk space on the client computer.
- Insufficient file access rights to a file that already exists.
- The file already exists (from a previous installation) and some other process has the file open preventing it from being overwritten. (The Client Setup program will ask a

previous installation of the Client Agent to terminate itself so that its files can be recopied.)

The <reason> may give further information: for example, "file not found" or "access denied", or it may give a DOS error number.

C111: Could not write to <filename>. Please contact your network administrator.

The Client Setup program tried to modify the file <filename> and failed. See C110 for possible causes.

C190: Client Agent successfully installed.

This is not an error condition. It provides confirmation that the Client Setup program ran successfully to completion. (If you have complex login scripts, it may be useful to know that CSETUP.EXE is actually being executed.)

C200: Incorrect version of <filename>. Please contact your network administrator.

The Client Agent could not load because one of the library files it needed, <filename>, was not present or was the wrong version.

This problem may occur if the installation directory on the server contains an incompatible mix of client files. You should reinstall the client files on the server and force the clients to reinstall (use the /reinstall switch on CSetup.EXE). See *CSetup.EXE command line switches*.

C209: Server shared folder not defined in CLIENT.DAT. Please contact your network administrator.

The most likely cause of this error is that the user has deleted the copy of CLIENT.DAT on his own computer.

The Client Agent communicates with the Discovery Repository via message files. These files are written to a shared message folder usually located on a network server. The Client Agent reads the name of this folder from the CLIENT.DAT file.

You should be asked to specify the location of the shared message folder when you install the Control Center. The Control Center Setup program writes this to the master CLIENT.DAT file. CSetup.EXE copies this file to each client.

C210: It was not possible to send a message file to the server shared folder "<folder name>". Please contact your network administrator.

The Client Agent communicates with the Discovery Repository via message files. These files are written to a shared message folder, <folder name>, usually located on a network server. In this case, the Client Agent was unable to create one of these message files. This may be because the network connection is not functioning correctly.

The <folder name> should be a UNC path to a directory on the server to which all clients have all file rights (Read, Write, Scan and Delete). There should be sufficient disk space available in this directory for all clients to write messages. As a guide, allow 100 KB per client.

C250: The user cancelled an audit before it was completed.

During the audit of a client computer, the user clicked the **Stop Audit** button in the progress dialog. Therefore the audit information held for this client computer is incomplete.

You may wish to request a new audit for this computer. You can hide **Stop Audit** on the progress dialog. See Setting the audit options in the section *Audit Options Page*. You can also choose to hide the entire progress dialog.

C251: Not enough memory to complete audit.

There was insufficient memory available to audit this client computer. Therefore the audit information held for this client computer is incomplete.

This may have been a temporary problem that will not reoccur. Try requesting a new audit for this computer.

C261: Audit schedule could not be set.

This alert is displayed at the Control Center: The Client Agent received an Audit Schedule message but it was unable to apply the schedule, either because the given schedule was invalid (unlikely), or because it was not possible to get a valid current time and date on the client computer (which can happen on older computers).

C270: The user cancelled the Customizable User Input dialog.

This alert is displayed at the Control Center: During the audit of a client computer the Customizable User Input dialog box was displayed but the user chose to cancel it. Therefore the information requested in this dialog was not obtained.

You may want to request a new audit for this computer. You can hide the **Cancel** button on the dialog by editing the USERINP.DAT file.

C271: Cannot find control file <filename>.

Only displayed when testing the Customizable User Input dialog via INPTEST.EXE. The USERINP.DAT file could not be found. USERINP.DAT defines the fields to be shown to the user and must be present.

C272: No input fields are defined. USERINP.DAT should contain sections [Field1] up to [Field20]

Only displayed when testing the Customizable User Input dialog via INPTEST.EXE.

C273: USERINP.DAT section [<FieldN>] contains unrecognised or missing field type. Must be Type=Edit or Type=DropDown only.

Only displayed when testing the Customizable User Input dialog via INPTEST.EXE.

C274: USERINP.DAT section [<FieldN>] contains unrecognised format string <string>. Format string must either be empty or contain only the characters A (matches a-z and A-Z), 9 (0-9) or X (any character)

Only displayed when testing the Customizable User Input dialog via INPTEST.EXE.

C275: Unrecognised or incorrectly formatted command line parameter at "<string>"

The permitted command line parameters for the Customizable User Input dialog are /? for help and /TEST to test the dialog.

C276: USERINP.DAT section [Registry] entry <RegReadN> is incorrectly formatted.
Expected "<HKEY\subkey>","<optional value name>","<optional field
name>"Unrecognised HKEY value "<string>". HKEY value should be
"HKEY_LOCAL_MACHINE", for example.

Only displayed when testing the Customizable User Input dialog via INPTEST.EXE.

**C278: USERINP.DAT section [<FieldN>] contains default text "<string1>" which violates
the specified format string "<string2>".**

Only displayed when testing the Customizable User Input dialog via INPTEST.EXE. You
have given a default value, string1, which is not valid according to the format string, string2,
you have defined. For example, you specify a format of AA99, i.e. two letters followed by
two digits, but you specify default text "ABCD".

C900: Error <number>. Please contact your network administrator.

Error <number> occurred for which there is no associated message. Under normal
circumstances, when the product is correctly installed and configured, you should not see
error C900. It may be a transient problem. If it persists,
reinstall the client agent on the client that generated this alert.

Executing scripts

Under certain circumstances it may be necessary to execute SQL script files to do maintenance
on the Discovery Repository e.g. resetting Web Control Center password. As these alterations
are permanent, this option should only be used by appropriate personnel or when directed to do
so by a Discovery Support Engineer.

It is possible to write your own SQL script files and have them execute from this option. To do
this copy your script file into the \scripts folder, which is located in the folder that the Discovery
Control Center was originally installed.

Reference

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